

MECHANICAL ENGINEERING

Technical Electives

(Subject to change depending on enrollment)

COURSE NO.	COURSE TITLE	PREREQUISITES
ME 2030	Analysis Techniques in Mechanical Engineering	MATH 1401 & ENGR 1025
ME 3147	Bioengineering	Junior standing in engineering.
ME 4024	Mechanical Behavior of Materials	ME 3024
ME 4110	Numerical Methods for Engineers (ME 5110)	MATH 3195 or (3191 & 3200); some programming exp.
ME 4112	Internal Combustion Engines	ENGR 3012
ME 4114	Designing with Composites (ME 5114)	ME 3043 or CE 3121
ME 4115	Applied Plasticity and Creep (ME 5115)	ME 3043
ME 4116	Robotics	ME 3065
ME 4120	Methods of Engineering Analysis (ME 5120)	MATH 3195 or (3191 & 3200)
ME 4132	Power Plant Systems Design	ME 3022
ME 4135	Mechanical Systems Design	ME 3035
ME 4136	Control Systems Design	ME 4023
ME 4141	Fluid Mechanics (ME 5141)	ME 3021
ME 4142	Thermal Systems Design	ENGR 3012 & ME 3021
ME 4147	Engineering Economy (CE 4077)	Junior standing
ME 4155	Air Conditioning Design	ME 3022 & 3042
ME 4160	Introduction to Operations Research	MATH 3195 or (3191 & 3200)
ME 4163	Rigid-body Dynamics (ME 5163)	ME 2033 or CE 3111, MATH 3195 or (3191 & 3200)
ME 4166	Computerized Numerical Control (CNC) (ME 5166)	Junior standing in engineering.
ME 4175	Finite Element Analysis in Machine Design (ME 5175)	ME 3035
ME 4195	Solid Modeling	Junior standing in engineering.

- Twelve (12) units of technical electives are required in the B.S. program.
- See semester schedule of courses for technical elective offerings.
- Up to six (6) units of 5000 level courses can be used as technical electives in the B.S. program and may count as credit towards a master's degree (see an advisor).

COURSE NO.	COURSE TITLE	PREREQUISITES
ME 5114	Designing with Composites	Graduate standing or consent of instructor
ME 5115	Applied Plasticity and Creep	Graduate standing or consent of instructor
ME 5121	Fluid Dynamics	Graduate standing or consent of instructor
ME 5123	Introduction to Continuum Mechanics	Graduate standing or consent of instructor
ME 5124	Yield-Limited Behavior of Materials	ME 5143
ME 5133	Theory of Inelastic Materials	ME 5143 or consent of instructor
ME 5142	Statistical Thermodynamics	Graduate standing or consent of instructor
ME 5144	Plasticity and Creep	ME 5143
ME 5161	Compressible Flow	ME 5141 or consent of instructor
ME 5162	Heat Transfer I	Graduate standing or consent of instructor
ME 5166	Computerized Numerical Control (CNC)	Graduate standing or consent of instructor
ME 5172	Heat Transfer II	ME 5141 or consent of instructor
ME 5175	Finite Element Stress Analysis	ME 5143 or consent of instructor

See graduate advisor for specific program options and electives for the Master of Science or Masters of Engineering degrees.