

Active Learning in Computer Engineering

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Abstract: Engineering education is a challenging environment that requires multiple modes to engage students in learning that contributes to technical, scientific, and general educational needs. One important component of modern teaching is to provide an environment where students move from a passive learning approach into an active mode. The goal is to provide the experience of doing and observing combined with a dialogue with self and others. These experiences should span the classroom, laboratory, mentoring, and advising environment. An overview of how this can be accomplished in the context of Computer Engineering will be provided along with examples of current teaching experiences and projects.

Biosketch: Dr. Kimberly E. Newman received her Ph.D. from the Georgia Institute of Technology (GT) as part of the Assembly and Test group in the Packaging Research Center. She is currently the P.I. on a grant from the National Science Foundation for Undergraduate Design Projects to Aid Persons with Disabilities in collaboration with medical professionals at Denver Health Medical Center. She received the best transactions paper for 2003 from the IEEE Education Society for her paper, "An Introductory Digital Hardware Laboratory Using a Low-Cost Autonomous Robot." In 2005, she became a Senior Member of the IEEE through service with the Computer Society International Design Competition. Her membership includes the Computer Society and Components, Packaging, and Manufacturing Technology (CPMT) Society.