

Mission of the ECE Department

The mission of the Department of Electrical and Computer Engineering is to produce the talent to make Texas the foremost electrical/electronics/computer industrial center in the world, to create significant individual and industrial growth opportunities, and to be, and to be recognized as, one of the premier electrical and computer engineering departments in the US.

Program Educational Objectives = what UT ECE graduates should accomplish their first few years on the job. What we want UT alumni to be known for early in their careers.

Electrical engineering graduates should:

1. contribute to the economic development of Texas and beyond through the ethical practice of electrical engineering in industry and public service.
2. exhibit leadership in technical or business activity through engineering ability, communication skills, and knowledge of contemporary and global issues.
3. continue to educate themselves through professional study and personal research, and graduate education.
4. design systems to collect, encode, store, transmit, and process energy and information. Improve system performance, either individually or in teams.
5. use their engineering ability and creative potential to create technology that will improve the quality of life in society.

The ECE Department has the additional goal of preparing our top undergraduates to seek admission to and excel in the best graduate programs in the world.

Evaluation process for Program Objectives (How will we know that we are doing a good job.)

1. Have a web-based survey of alumni at 1st, 3rd and 6th year after graduation. Ask about evidence of leadership, plans for advanced study, job title, and major projects. Follow up with selectively made phone interviews to add anecdotal evidence.
2. Make evaluation of graduates a regular agenda item for semi-annual Visiting Committee meetings.
3. Visit several major employers per year, speaking with engineering managers and new graduates about their experience.

4. Use COE alumni survey.

Program Outcomes = what students are expected to know and be able to do at graduation. What we give them to enable them to accomplish Program Educational Objectives.

ECE graduates should be able to

1. use current engineering tools for design, analysis, and communication of technical products
2. use critical thinking to analyze and solve problems in ECE by applying fundamental knowledge in math, science, and engineering
3. design ECE components, systems, and processes that meet technical, safety, environmental, and economic specifications
4. prepare and deliver persuasive oral and written communication using current presentation tools.
5. work independently and in collaborative, diverse multi-disciplinary teams
6. apply theoretical knowledge, experimental techniques, and appropriate computational methods to identify, formulate, and solve problems
7. understand ethical business and engineering practice in the context of social and economic realities as well as other contemporary issues.

Assessment practices: How do we know that we are giving them the intended outcomes?

1. Develop program outcome correlation matrix to ensure that all outcomes are covered by the curriculum
2. Have faculty make self-assessment of teaching improvements for each teaching assignment. (web-based)
3. Have students make self-assessment in exit interview.
4. Have a web site to gather and analyze input and suggestions from students about courses, instructors, and curriculum matters. This input would be evaluated by a committee chaired by the chairman with faculty, staff, and student representation.