DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Almost any technology that distinguishes the 20th and 21st centuries from previous history has the imprint of electrical and computer engineering - electric power, radio, television, radar, satellite communication, global positioning system, medical diagnostic and procedure systems, sophisticated domestic appliances, cell phones, computers and sophisticated sensors and control systems used in underwater, space exploration and national security. Electrical and computer engineering has advanced national and global prosperity through research, development and application of electrical and computer technologies and sciences for the benefit of humanity, and has helped create the global village. By choosing electrical or computer engineering our graduates embark on an exciting and productive career with endless opportunities and help in shaping a better future for mankind.

The curriculum is designed to prepare the undergraduate for work in the highly diverse electrical and computer engineering profession. A solid foundation in physics, chemistry and mathematics is used to support courses in the fundamentals of electrical and computer engineering. The use of computers is integrated throughout the curriculum, and basic studies in circuits, electronics, electromagnetic fields and digital logic lead to a flexible program of electives in the junior and senior year. Electives may be chosen from the broad fields of analog and mixed-signal electronics, biomedical imaging, sensing and genomic signal processing, computer engineering and systems, device science and nanotechnology, electric power systems and power electronics, electromagnetics and microwaves, and information science and systems. Laboratory work is structured to first familiarize the student with the basic concepts and then to apply these concepts to solve engineering problems.

Before commencing course work in the major, students must be admitted to the major or have the approval of the department.

Mission

Activities of the Electrical and Computer Engineering Department including research, teaching, and professional and community service revolve around the fourfold mission of the department:

- To create new knowledge and challenge young minds by participation in the process of discovery and invention
- To educate electrical and computer engineers with a solid background of fundamentals, stretching their imagination
- To prepare graduates for an exciting future
- To serve the society through research, education and outreach activities

Undergraduate education plays a major part in helping the department to achieve its mission. The Electrical and Computer Engineering programs are accredited by the Engineering Accreditation Commission of ABET, www.abet.org. More information on these efforts can be found at the Department of Electrical and Computer Engineering (http://engineering.tamu.edu/electrical/) website by clicking on the link for ABET Accreditation.

Faculty

Abu-Rub, Haithem A, Professor
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**Majors**

- Bachelor of Science in Computer Engineering (http://catalog.tamu.edu/undergraduate/engineering/electrical-computer/computer-engineering-bs/)
- Bachelor of Science in Electrical Engineering (http://catalog.tamu.edu/undergraduate/engineering/electrical-computer/electrical-bs/)

**Minors**

- Electrical Engineering Minor (http://catalog.tamu.edu/undergraduate/engineering/electrical-computer/electrical-minor/)