Electrical Engineering

Program Mission Statement
The mission of the School of Engineering is to provide diverse learning opportunities in the technical and professional aspects of engineering that prepare all participants to thrive in an evolving world.

The electrical engineering program education objectives are to produce graduates with:
- sound engineering fundamentals,
- strong team and leadership skills,
- strong problem solving skill,
- an ability to learn and advance, and
- effective communication skills.

Student Learning Outcomes

Graduates will be able to:

Content/Discipline-Specific Knowledge/Skills

- utilize techniques and tools based on the principles of mathematics and science for engineering practice, design, and problem solving. These techniques and tools can be used for theoretical problems, engineering design, experimental techniques, and for data analysis and interpretation.

This outcome address ABET Student Outcomes:
(a) An ability to apply knowledge of mathematics, science, and engineering
(k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
(m) An ability to analyze and design complex electrical and electronic devices, software, and systems containing hardware and software components

Communication Skills

- communicate technical data and design information effectively using visual, written, and oral communication.

This outcome address ABET Student Outcome:
(g) An ability to communicate effectively

Critical Thinking Skills

- perform engineering design, which is a decision making process (often iterative), in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet stated needs.

This outcome address ABET Student Outcomes:
(c) An ability to design a system, component, or process to meet desired needs
(h) The broad education necessary to understand the impact of engineering solutions in a global and societal context

Assessment Approaches

The electrical engineering program utilizes a number of direct and indirect assessment measures, in agreement with our accreditation agency ABET, to assess proficiency of course outcomes and student outcomes. Direct assessment tools include course design projects, senior capstone design projects, and assessment of course learning outcomes in each course. Indirect assessment tools include graduating senior surveys, alumni surveys, and employer surveys.