

# Electrical and Computer Engineering

Students in the electrical and computer engineering department have two degree programs from which to choose: electrical engineering and computer engineering. The electrical and computer engineering programs are accredited by the Engineering Accreditation Commission of ABET (<http://www.abet.org>)<sup>1</sup>.

The programs are structured to assure that electrical engineering students are familiar with computers and computer hardware and computer engineers and scientists have a background in electrical engineering principles. Electrical engineering and computer engineering students should have a strong interest in mathematics and science. As part of the curriculum, senior-level students are required to take a two-semester senior project sequence. This project gives the student the opportunity to apply skills acquired during their coursework to real-world problems.

## Electrical Engineering

Program educational objectives (PEOs) are broad statements that describe what graduates are expected to attain within a few years after graduation. Program educational objectives are based on the needs of the program's constituencies.

We define two PEOs for our electrical engineering program, where at least one of the PEOs should be attained by graduates:

1. The alumni, in the first several years after receiving their baccalaureate degree, will be productive and successful in the professional practice of electrical engineering as evidenced by:
  - a. Job satisfaction and contributions toward the success of one's employers;
  - b. Effective participation and leadership on engineering teams;
  - c. Being effective in identifying and solving real-world problems;
  - d. Being effective at handling increased responsibilities;
  - e. Receipt of job-related awards, promotions/raises and professional accomplishments.
2. The alumni, in the first several years after receiving their baccalaureate degree, will be successful in pursuing continuing education as evidenced by:
  - a. Effective progression toward an advanced postundergraduate degree or professional licensure/certification;
  - b. Participation in professional societies, professional conferences and meetings;
  - c. Participation in life-long learning by adapting to new technologies, tools and methodologies in electrical engineering, and responding to the challenges of a changing environment;
  - d. Scholarly accomplishments (e.g., publications, presentations);
  - e. Professional self-study.

The electrical engineering degree has a sufficient number of technical electives to allow the student to develop skills in specialized areas such as communication and signal processing, control systems, electric power systems, electronics and digital systems.

## Computer Engineering

Program educational objectives (PEOs) are broad statements that describe what graduates are expected to attain within a few years after graduation. Program educational objectives are based on the needs of the program's constituencies.

We define two PEOs for our computer engineering program, where at least one of the PEOs should be attained by graduates:

1. The alumni, in the first several years after receiving their baccalaureate degree, will be productive and successful in the professional practice of computer engineering as evidenced by:
  - a. Job satisfaction and contributions toward the success of one's employers;
  - b. Effective participation and leadership on engineering teams;
  - c. Being effective in identifying and solving real-world problems;
  - d. Being effective at handling increased responsibilities;
  - e. Receipt of job-related awards, promotions/raises and professional accomplishments.
2. The alumni, in the first several years after receiving their baccalaureate degree, will be successful in pursuing continuing education as evidenced by:
  - a. Effective progression toward an advanced postundergraduate degree or professional licensure/certification;
  - b. Participation in professional societies, professional conferences and meetings;
  - c. Participation in life-long learning by adapting to new technologies, tools and methodologies in computer engineering, and responding to the challenges of a changing environment;
  - d. Scholarly accomplishments (e.g., publications, presentations);
  - e. Professional self-study.

The computer engineering degree is a more structured degree compared to electrical engineering, with more required courses and thus fewer electives.

<sup>1</sup> Link opens new window.

## Majors in Electrical and Computer Engineering

- Accelerated BS to MS in Electrical and Computer Engineering (<http://catalog.wichita.edu/undergraduate/engineering/electrical-computer-engineering/accelerated-bs-ms-electrical-computer-engineering/>)
- BS in Computer Engineering (<http://catalog.wichita.edu/undergraduate/engineering/electrical-computer-engineering/computer-engineering-bs/>)
- BS in Electrical Engineering (<http://catalog.wichita.edu/undergraduate/engineering/electrical-computer-engineering/electrical-engineering-bs/>)

## Courses in Electrical and Computer Engineering

- Electrical and Computer Engineering (ECE) (<http://catalog.wichita.edu/undergraduate/courses/ece/>)<sup>1</sup>

<sup>1</sup> For an electrical and computer engineering course to be used as a prerequisite, it must have been passed with a C- or better.