Electrical Engineering and Computer Science

Students in the electrical engineering and computer science department have three degree programs from which to choose, electrical engineering, computer engineering, or computer science. The electrical and computer engineering programs are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The Bachelor of Science degree program in computer science is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org.

All programs require a total of 128 credit hours minus hours from advanced placement credit. The programs have a minimum of 65 credit hours in common. The common hours are made up of:

- communication skills (9 credit hours),
- math and science courses (29 credit hours),
- general education courses (12 credit hours), and
- major courses (15 credit hours).

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, computer engineering and computer science 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

The objectives of the electrical engineering program are as follows:

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

The objectives of the computer engineering program are as follows:

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 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.

Computer Science

The objectives of the computer science program are as follows:

1. The alumni, in the first several years after receiving their baccalaureate degree, will be productive and successful in the professional practice of computing as evidenced by:
   a. Job satisfaction and contributions toward the success of one’s employers;
   b. Effective participation and leadership on computing/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 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 computing, and responding to the challenges of a changing environment;
   d. Scholarly accomplishments (e.g., publications, presentations);
   e. Professional self-study.

The computer science degree offers courses that emphasize core computer science technologies and their applications.
Majors in Electrical Engineering and Computer Science

• BS in Electrical Engineering ([http://catalog.wichita.edu/undergraduate/engineering/electrical-engineering-computer-sciences/electrical-engineering-bs](http://catalog.wichita.edu/undergraduate/engineering/electrical-engineering-computer-sciences/electrical-engineering-bs))

• BS in Computer Engineering ([http://catalog.wichita.edu/undergraduate/engineering/electrical-engineering-computer-sciences/computer-engineering-bs](http://catalog.wichita.edu/undergraduate/engineering/electrical-engineering-computer-sciences/computer-engineering-bs))

• BS in Computer Science ([http://catalog.wichita.edu/undergraduate/engineering/electrical-engineering-computer-sciences/computer-science-bs](http://catalog.wichita.edu/undergraduate/engineering/electrical-engineering-computer-sciences/computer-science-bs))

Minors in Electrical Engineering and Computer Science

• Computer Science ([http://catalog.wichita.edu/undergraduate/engineering/electrical-engineering-computer-sciences/computer-science-minor](http://catalog.wichita.edu/undergraduate/engineering/electrical-engineering-computer-sciences/computer-science-minor))

Courses in Electrical Engineering and Computer Science

• Computer Science (CS) ([http://catalog.wichita.edu/undergraduate/courses/cs](http://catalog.wichita.edu/undergraduate/courses/cs))¹

• Electrical Engineering (EE) ([http://catalog.wichita.edu/undergraduate/courses/ee](http://catalog.wichita.edu/undergraduate/courses/ee))²

¹ For a computer science course to be used as a prerequisite, it must have been passed with a C- or better.

² For a course to be used as a prerequisite, it must have been passed with a C- or better.