Electrical Engineering

Department of Electrical Engineering
Engineering Industry Building (EIB), Room 409, (907) 786-1900

The Department of Electrical Engineering offers a Bachelor of Science in Electrical Engineering (BS EE), and a Minor in Electrical Engineering. The baccalaureate program is fully accredited. During the first two years of study, students are introduced to principles of mathematics, chemistry and physics, as well as basic circuit theory, digital logic and electrical devices. The third year of study largely focuses on fundamental electrical engineering concepts, including courses in signal analysis, electromagnetism, instrumentation and telecommunication. During the fourth year students take more advanced courses including technical electives that are more focused on electrical engineering analysis and design. Upper-division electives include courses in computer design, antenna theory, communication theory, power and control systems. Students also take courses on written and oral communication, humanities, social sciences and fine arts to improve their communication skills and to put their profession into a broader societal context.

Accreditation

The Bachelors of Science in computer systems engineering, electrical engineering and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET (http://www.abet.org/).

Program Objectives

1. To produce electrical engineering graduates with the training and skills to enter the job market or to continue their education by attending graduate school.
2. To produce graduates who will become business and community leaders in Alaska and throughout the world.
3. To produce graduates who will, through their training in electrical engineering and their commitment to their continuing education, become the entrepreneurs driving Alaska’s growth in the future.
4. To produce graduates in electrical engineering who conduct themselves and practice their profession with the highest of professional standards.

Preparation

While in high school, students can prepare for entering and succeeding in the university engineering program. In order to be the best prepared, students should complete the following high school courses with grades of C or better:

- Algebra - 2 years
- Chemistry - 1 year
- English - 3 years
- Physics - 1 year
- Trigonometry - 1/2 year

Students successfully completing the above courses should be prepared to enroll in the first year of courses that count toward the engineering degree. Students without the above preparatory courses will need to take equivalent university courses before taking some of the first year of courses that count toward the engineering degree.

Programs of Study

Bachelor of Science

- BS in Electrical Engineering (http://catalog.uaa.alaska.edu/undergraduateprograms/coeng/electricalengineering/bs-electricalengineering/)

Minor

- Minor in Electrical Engineering (http://catalog.uaa.alaska.edu/undergraduateprograms/coeng/electricalengineering/minor-electricalengineering/)