DEPARTMENT OF ELECTRICAL ENGINEERING

ELECTRICAL ENGINEERING PROGRAMS

The Electrical Engineering program offers three four-year degrees in Electrical and Computer Engineering. The programs leading to the BS Computer Engineering, BS Electrical Engineering, and BS Electrical Engineering with Biomedical Option are accredited by the Engineering Accreditation Commission of ABET (http://www.abet.org). The accredited computer engineering program is one of only three such programs in the state of Arkansas.

Mission

The mission of Electrical Engineering at Arkansas Tech University is to develop and educate students to become electrical or computer engineers exhibiting professional competency and ethics, with a desire for life-long learning.

In order to fulfill its mission, the program has established the following educational objectives.

Graduates of the Arkansas Tech University Computer and Electrical Engineering degree programs, within a few years of graduating, will have

- Obtained employment in an engineering or closely-related field, or entered a graduate program in engineering or a related field or gained admission to a professional program such as medicine, law or business.
- Solved problems aided by the engineering proficiencies they learned in their undergraduate program.
- Recognized a pathway to make positive contributions to society using their engineering talents and skills by practicing their profession in an ethical and responsible manner.
- Engaged in continuing education and pursuit of membership in professional societies as well as FE/PE certification, or other certifications relevant to their chosen occupational field.
- Demonstrated accountability and worked effectively in a team environment with strong emphasis on multidisciplinary membership, inclusion, and communication.

Vision

The vision of Electrical Engineering is to be one of the regions exceptional accredited programs of electrical engineering producing professionals for the state, nation and world.

It is highly recommended that all freshmen engineering students purchase laptop computers. Laptop computer specifications are at: https://www.atu.edu/engineering/specifications.php

Transfer Policy for Electrical and Mechanical Engineering Programs

1 .Upper level engineering courses (3000 and 4000 level) are transferable from ABET accredited institutions accredited by the Engineering Accreditation Commission (EAC).
2 .Engineering senior design course credits are not transferable.
3 .No more than 12 credit hours of the required 3000 - 4000 level engineering, engineering elective or technical elective course credits may be transferred.
1 .All transfer courses from U.S. universities must be from institutions of higher education which have been accredited by a regional accrediting agency.
1 .Courses presented for transfer credit from non-U.S. institutions which are not ABET accredited must be accompanied by supporting materials such as course outlines, catalog descriptions, and, possibly, examples of student work, tests, etc. All such supporting material must be presented in English and must also meet any additional requirements imposed by the Office of Admissions and the Registrar. Arkansas Tech University requires the applicant to submit his/her academic credentials to a credential evaluation service. Preapproved courses from institutions in the ATU Study Abroad Program are exempt from these requirements.

Student Outcomes

Students in Computer Engineering, Electrical Engineering, and Electrical Engineering with a Biomedical option will be expected to meet the outcomes from ABET Engineering Accreditation Commission Criterion 3:

1 .An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2 .An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3 .An ability to communicate effectively with a range of audiences.
4 .An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5 .An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6 .An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7 .An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

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For more information, please visit www.atu.edu/electrical