# MECHANICAL ENGINEERING

## DEPARTMENT OF MECHANICAL ENGINEERING

The Mechanical Engineering Program offers a four-year degree leading to the Bachelor of Science in Mechanical Engineering (BSME) and a two-year degree programs in Manufacturing and in Nuclear Technology. The program leading to the Bachelor of Science in Mechanical Engineering (BSME) degree is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

#### Mission

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

### **Program Educational Objectives**

Graduates of the Mechanical Engineering program will be problem solving, responsible professionals ready for work in industry or further studies in graduate programs. Specifically, based on the needs of the program's regional industry partners, within a few years of graduation, mechanical engineering alumni will have:

- · Obtained professional employment in an engineering or closely related field, entered a graduate program in engineering or gained admission to a professional program such as medicine, law or business.
- Solved problems by applying appropriate engineering tools to the analysis, design, and production of products or systems.
- Continued to develop their skills and increase their knowledge through professional activities including FE/PE certification, membership in professional societies, and continuing education courses.
- Demonstrated good communication skills and worked effectively in team environments that include diverse membership across disciplines, backgrounds, positions, and locations.

#### Vision

The Vision of the Mechanical Engineering Program is to be one of the region's exceptional accredited programs of mechanical engineering producing professionals for the state, nation and world.

It is highly recommended that all freshmen engineering students starting fall 2017 purchase laptop computers. Laptop computer specifications are at: https://www.atu.edu/engineering/specifications.php.

## Transfer Policy for Electrical and Mechanical Engineering Departments

- 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 A TU Study Abroad Program are exempt from these requirements.

## **Student Outcomes**

Students in Mechanical Engineering 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.

## **Contact Information**

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