BSME in Mechanical Engineering

Degree Program Description

The mechanical engineering curriculum provides students a foundation in mathematics, the basic sciences, and engineering. Students take core courses in the mechanical sciences (dynamics, engineering materials, manufacturing, dynamic systems and control, and machine element design) and the thermal-fluid sciences (thermodynamics, fluid mechanics, and heat transfer). In addition, students obtain laboratory experience through three lab courses focused on instrumentation and measurements, materials and manufacturing, and thermal-fluid systems. The Bachelor of Science in Mechanical Engineering (BSME) prepares students for employment in industry or government or for further study toward other degrees such as the JD, MD, MS, and PhD.

Major Program Requirements

The MAE curriculum allows students to transfer among departments during the first two years. Students concentrate on departmental requirements at the beginning of the junior year. The senior year includes five MAE electives that allow students to develop individual programs of study. This flexibility enables students to complete a traditional program or create their own with special emphasis on areas such as materials, manufacturing, thermal-fluid systems, dynamics and control, or aerospace. Students are also required to complete one 3-hour cultural awareness course, which is selected from an approved cultural awareness course list, created and maintained by the College of Engineering or which meets the Arts and Science (A&S) diversity-intensive (DI) requirement.

Experience in design is distributed throughout the required courses in the curriculum and culminates in the senior capstone design course. The capstone design experience integrates earlier technical work with economic, safety, ethical, and environmental considerations. The projects are primarily obtained from industrial or private business clients. The presentations of project results are made to a review panel consisting of members of the faculty, the MAE Industrial Advisory Council, and representatives of the client firms.

Major Core Requirements

In addition to the University general education (http://catalog.missouri.edu/academicdegerequirements/generaleducationrequirements/ and graduation requirements (http://catalog.missouri.edu/academicdegerequirements/universityrequirements/), the Department of Mechanical and Aerospace Engineering requires the following courses:

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Semester Plan

Below is a sample plan of study, semester by semester. A student's actual plan may vary based on course choices where options are available.

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**Fourth Year**

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Total Credits: 126

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Mizzou University of Missouri