B.S.M.E. in Mechanical Engineering

Overview
Degree Requirements

Description

The B.S.M.E. provides students with fundamentals in the field and a specialization in the following disciplines: mechanics, thermodynamics, fluid mechanics, materials, design, and laboratory diagnostics. The preparation fosters an inquisitiveness and understanding that will preclude future obsolescence of the mechanical engineering graduate.

Minimum Total Credit Hours: 128

Goals/Mission Statement

The program educational objectives of the Department of Mechanical Engineering derive their foundation from the statement of purpose for The University of Mississippi's statement of purpose and vision statement. The academic mission of the Department of Mechanical Engineering (ME) is focused on broad, overarching goals that reflect both the academic purpose of the School of Engineering and the university. The stated university goals have been used to refine the goals and objectives of the department. The goals and objectives have been established from input by the faculty, students, and the Ole Miss Engineering School Advisory Board as constituency groups. These goals and objectives are listed as follows.

- Educate students in the broad scope of the mechanical engineering discipline so as to be successful in applying and advancing knowledge in industry, academia, and related fields;
- Conduct basic and applied research in fields related to mechanical engineering to maintain and enhance the quality and reputation of the faculty and the School of Engineering;
- Serve industry, the engineering community, and the community at large in the State of Mississippi, the nation, and the world;
- Teach students the influence of issues related to health, safety, economy, environment, and society while seeking engineering solutions.

Program Educational Objectives

This process and these goals have resulted in the development of the Department of Mechanical Engineering curriculum consisting of lecture, design, and laboratory courses that stress the departmental goals. The mechanical engineering faculty, advisory board, and students, as constituency groups, have established the following undergraduate program educational objectives:

1. Graduates will meet or exceed the expectations of their employers.
2. Graduates will pursue advanced study, if desired.
3. Graduates will assume leadership roles in their professions and/or communities.

Student Outcomes

Students of the Bachelor of Science in Mechanical Engineering program will demonstrate achievement of the following student outcomes:

a. an ability to apply knowledge of mathematics, science, and engineering
b. an ability to design and conduct experiments, as well as to analyze and interpret data
c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d. an ability to function on multidisciplinary teams
e. an ability to identify, formulate, and solve engineering problems
f. an understanding of professional and ethical responsibility
g. an ability to communicate effectively
h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
i. a recognition of the need for, and an ability to engage in life- long learning
j. a knowledge of contemporary issues
k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Course Requirements

Specific requirements for the B.S.M.E. include Math 261-264, Math 353; Writ 100, Writ 101, or Hon 101; Writ 102, Liba 102 or Hon 102; Chem 105, 106, 115, 116; Phys 211, 212, 221, 222; Csci 251; Econ 310; Engr 207, 309, 310 or Math 375, 312, 313, 314, 321, 323, 330, 360, 361, 420, 553; M E 101, 324, 325, 401, 402, 405 or Engr 551, 416, 419, 427, 428, 438. One technical elective must be chosen from Engineering Elective A (includes 1 hour of design): M E 405, 417, 418, 422, 523, 524, 526, 527, 531, 534, 535, 538, 540, 541, 555.

A second technical elective must be chosen from any of the Engineering Elective A courses or from Engineering Elective B courses, including M E 421, 521, 522, 530, 532, 533, Engr 410, 515, 558, 559, 585, 590, 593.

Specializations

- Emphasis - Manufacturing

The University of Mississippi is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award certificates and baccalaureate, master's, specialist, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or visit online at www.sacscoc.org for questions about the accreditation.