BS in Mechanical Engineering

Educational Objectives

Graduates of the Bachelor of Science degree in mechanical engineering are expected to meet the following objectives within a few years of graduation:

- Educate students to be successful mechanical engineers with emphasis on sustainability and globalization.
- Prepare students to pursue life-long learning.
- Prepare students for real-world problems through the program's emphasis on experiential learning and industry-based projects in a diverse and innovative work environment.

Mechanical Engineering Honors Track Admission Requirements

1. Students must be admitted to the Honors College;
2. Students must be within 60 hours of degree completion;
3. Students must have an overall GPA of at least 3.500 and a GPA of 3.500 in all engineering courses; and
4. Students must complete a letter of application to the mechanical engineering chairperson including the following:
   a. Transcript;
   b. Resume; and
   c. One-page essay on academic and career plans including an undergraduate research idea.

BS in Mechanical Engineering Sequence of Courses

The program requires the completion of 128 credit hours for graduation, minus hours commensurate with advanced placement credit. Specific degree requirements are given below. All the prerequisite courses must have a grade that generates 2.000 or more credit points per credit hour.

Course	Title	Hours
Foundation Courses		
ENGL 101	College English I	3
or ENGL 100	English Composition	
ENGL 102	College English II	3
COMM 111	Public Speaking	3
PHIL 385	Engineering Ethics	3
Other fine arts/humanities & social/behavioral sciences courses [1]		15
Mathematics/Natural Sciences		
MATH 242	Calculus I	5
MATH 243	Calculus II	5
MATH 344	Calculus III	3
MATH 555	Differential Equations I	3
PHYS 313	Physics for Scientists I	4
PHYS 314	Physics for Scientists II	4
PHYS 315	University Physics Lab I	1
CHEM 211	General Chemistry I	5
Natural Sciences Elective [2]		3
Major Courses		
AE 223	Statics	3
AE 333	Mechanics of Materials	3
EE 282	Circuits I	4
IME 222	Engineering Graphics	2
IME 222L	Graphics Lab	1
IME 258	Manufacturing Methods and Materials I	3
ME 250	Materials Engineering	3
ME 251	Materials Engineering Laboratory	1
ME 325	Numerical Methods for Engineers	3
ME 335	Dynamics for Mechanical Engineers	3
ME 339	Design of Machinery	3
ME 398	Thermodynamics I	3
ME 439	Mechanical Engineering Design I	3
ME 521	Fluid Mechanics	3
ME 522	Heat Transfer	3
ME 533	Mechanical Engineering Laboratory	3
ME 633	Mechanical Engineering Systems Laboratory	3
ME 659	Mechanical Control Systems	3
ME 662	Senior Capstone Design	3
Mechanical Engineering Elective [2]		3
Mechanical Design Elective [2]		3
Thermal Design Elective [2]		3
Thermal/Fluids Science Electives [2]		3
Technical Electives [2]		3
Total Credit Hours		128

1 Refer to graduation requirements at the beginning of this section for details.

2 Must be chosen with advisor's approval.

Applied Learning

Students in the Bachelor of Science in mechanical engineering program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing ME 662 Senior Capstone Design.

Mechanical Engineering Honors Track

Completion Requirements

1. Formal admission into the mechanical engineering departmental honors track;
2. Maintain a minimum overall GPA of 3.500 and a minimum GPA of 3.500 in engineering courses; and
3. One of the following two options:
   a. Complete any of the ME 600- or 700-level elective courses with a grade of *B* or better; or
   b. For students with research as part of their professional interests — enroll in ME 678, and complete an undergraduate research project under faculty guidance, resulting in an honors report and presentation of a technical paper highlighting the student's research in a local technical venue such as GRASP (Undergraduate Research and Scholarly Projects), or a relevant ASME technical conference or equivalent.