**B.S. in Mechanical Engineering**

*Curriculum of Mechanical Engineering (no concentration)*


**Freshman:**
- **1st semester** (16 credits)
  - MAE 1001 (1, F) Mechanical and Aerospace Engineering
  - MATH 1231 (3, F&S) Single Variable Calculus
  - SEAS 1001 (1, F) Engineering Orientation
  - CHEM 1111 (4, F&S) General Chemistry
  - UW 1020 (4, F&S) University Writing

**Freshman:**
- **2nd semester** (16 credits)
  - MATH 2184 (3, F&S) Linear Algebra
  - CSCI 1121 (3, S) C Computing
  - PHYS 1021 (4, F&S) University Physics I
  - MAE 1004 (3, F&S) Engineering Drawing and Computer Graphics

**Sophomore:**
- **1st semester** (16 credits)
  - APSC 2057 (3, F&S) Analytical Mechanics I
  - APSC 2113 (3, F&S) Engineering Analysis I
  - MAE 2117 (3, S) Engineering Computations
  - MAE 3190 (3, F) Analysis and Synthesis of Mechanisms

**Sophomore:**
- **2nd semester** (16 credits)
  - APSC 2058 (3, F&S) Analytical Mechanics II
  - MAE 2131 (3, S) Thermodynamics
  - MAE 3117 (3, S) Methods of Engineering Experimentation
  - MAE 3192 (3, F) Manufacturing Process and Systems

**Junior:**
- **1st semester** (18 credits)
  - MAE 3126 (3, F) Fluid Mechanics
  - MAE 3190 (3, F) Analysis and Synthesis of Mechanisms
  - CE 2220 (3, F&S) Mechanics of Solids

**Junior:**
- **2nd semester** (15 credits)
  - MAE 3187 (3, S) Heat Transfer
  - MAE 3134 (3, S) Linear System Dynamics
  - MAE 3166 (3, S) Materials Engineering

**Senior:**
- **1st semester** (18 credits)
  - MAE 4149 (3, F) Thermal Systems Design
  - MAE 4182 (3, F) Electromagnetic Control and System Design
  - MAE 4193 (3, F) Engineering Systems Design

**Senior:**
- **2nd semester** (15 credits)
  - MAE 4152W (3, S) Mechanical Engineering Laboratory
  - Technical Elective (3)
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**Technical Elective:** Shall be selected from among the MAE 3000, 4000, or 6000 level courses, except that the following are excluded: MAE 3171, MAE 4172, MAE 6298, MAE 6299, MAE 6999. All technical electives must be approved by the undergraduate advisor. Technical courses from other departments (3000, 4000, or 6000 level) may be permitted, on a case by case basis, if approved by both the undergraduate advisor and department chair.

**Color Code:**
- Design Courses
- Mechanical, Materials, Processes
- Electrical, Measurements, Controls
- Thermal/Fluid Sciences
- Humanities/Social Sciences, Writing
- Basic Science
- Mathematics

*Phil 2135 is required in place of a humanities elective*