Mechanical Engineering Curriculum
(BSME Degree)

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
  Pre: MATH 1231
- CSCI 1121 (3, S)
  C Computing
  Pre: MATH 1231
- PHYS 1024 (4, F&S)
  University Physics I
  Pre: MATH 1231
  Co: MATH 1232
- MATH 1232 (3, F)
  Single Variable Calculus II
  Pre: MATH 1231

Sophomore:
1st semester
(16 credits)
- APSC 2057 (3, F&S)
  Analytical Mechanics I
  Pre/Co: APSC 2113, PHYS 1021
- APSC 2113 (3, F&S)
  Engineering Analysis I
  Pre/Co: MATH 1231
- PHYS 1022 (4, F&S)
  University Physics II
  Pre: PHYS 1021
- ECE 2110 (4, F&S)
  Circuit Theory
  Co: APSC 2113, PHYS 1022

Sophomore:
2nd semester
(16 credits)
- APSC 2058 (3, F&S)
  Analytical Mechanics II
  Pre: APSC 2057
- MAE 2131 (3, S)
  Thermodynamics
  Pre: PHYS 1021
- MAE 2117 (3, S)
  Engineering Computations
  Pre: CSCI 1121
- MAE 2233 (3, F&S)
  Multivariable Calculus
  Pre: MATH 1232

Junior:
1st semester
(18 credits)
- MAE 3126 (3, F)
  Fluid Mechanics
  Pre: APSC 2058
- MAE 3190 (3, F)
  Analysis and Synthesis of Mechanisms
  Pre: APSC 2058
- CE 2220 (3, F&S)
  Mechanics of Solids
  Pre: APSC 2057, 2113
- MAE 3166 (3, F)
  Materials Engineering
  Pre: CHEM 1111, PHYS 1022

Junior:
2nd semester
(15 credits)
- MAE 3187 (3, S)
  Heat Transfer
  Pre: MAE 3126, 2131
- MAE 3134 (3, S)
  Linear System Dynamics
  Pre: APSC 2058, 2113
- MAE 3120 (2, S)
  Methods of Engineering Experimentation
  Pre: MAE 2117
- MAE 3191 (3, S)
  Mechanical Design
  Pre: CE 2220, MAE 2117

Senior:
1st semester
(18 credits)
- MAE 4149 (3, F)
  Thermal Systems Design
  Pre: MAE 3187
- MAE 4182 (3, F)
  Electromagnetic Control and System Design
  Pre: MAE 2117, 3134
- MAE 4193 (3, F)
  Engineering Systems Design
  Pre: MAE 3191

Senior:
2nd semester
(15 credits)
- MAE 4152W (3, S)
  Mechanical Engineering Laboratory
  Pre: MAE 3120
- Technical Elective (3)
- Technical Elective (3)

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

Technical Electives:
Approved courses: The MAE 3000, 4000, or 6000 level courses, except that the following are excluded: MAE 3171, MAE 4172, MAE 6298, MAE 6299, MAE 6999. Technical courses from other departments (3000, 4000, or 6000 level) may be selected subject to approval of the faculty advisor and department chair. Students must receive approval before registering for the selected course. The selected course must be listed in the student’s advising form (SEAS Undergraduate Advising Form).

ASME membership recommended
FE Exam recommended in the senior year

* Students must have completed the prerequisites for the selected courses.