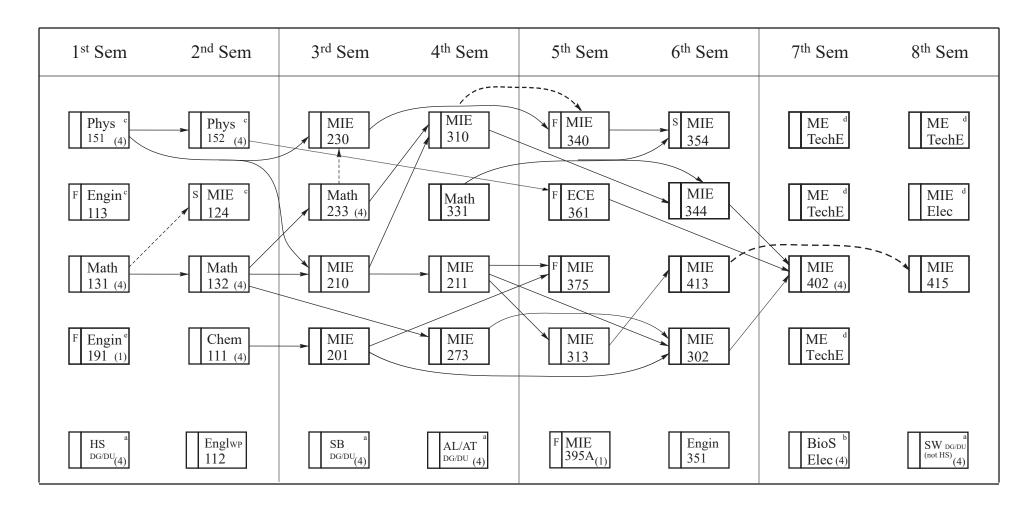
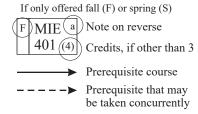
# Mechanical and Industrial Engineering Department MECHANICAL ENGINEERING CURRICULUM





**Scheduling Note:** Courses offered vary from year to year and from semester to semester. The sequence of courses shown is only a sample. Students will plan their individual programs after consulting the University Registration Materials and the MIE Department Registration Notes.

**Scheduling Option:** Students who do not enroll in MIE 302 in their 5th semester may choose to take MIE 313 instead and may take MIE 413 and MIE 415 in their 6th and 7th semesters, respectively.

**Graduation Clearance:** Both University and Department Cumulative GPAs of 2.0 are required for graduation.

**Prerequisites:** Not all prerequistes are shown. Consult SPIRE Course Descriptions for complete listings. Students must satisfy prerequisites or obtain instructor permission, irrespective of SPIRE enrollment.

Total Credits: 124 Revised 6/16/2025

# **ME Degree Program, Flowchart Notes**

**NOTE**: The flowchart is not the official student record. It should be used in conjunction with your university transcript and your academic requirements report.

Notes: a. Social World Requirement: 4 courses, each 4 credits (one from each group)

- 1) AL or AT 3) HS
- 2) SB 4) AL, AT, SB, SI or I

#### **Social World Diversity Requirement**

One of the four Social World courses must have a global diversity designation (DG) and one must have a United States diversity designation (DU)

- b. Biological Science Requirement: Any 4 cr course having the Biological Science (BS) designation.
- c. Alternative Courses: An approved alternative exists to the "standard" course shown.
- d. **Mechanical Engineering Program Electives:** Students must take 4 ME Tech Elective courses and one MIE Elective course. Other upper level engineering courses, including courses in other engineering and related disciplines, may be acceptable as ME Tech Elective courses. MIE 353 is <u>not</u> considered a ME Tech Elective.
- e. First Year Seminar: This course is not a graduation requirement and is not included in the total credits.

All MIE courses at or above the 300 level, including ME Tech Electives, are acceptable as the MIE Elective. Chem 112 and Math 235 also satisfy the MIE Elective requirement. Courses related to ME but taught in other Engineering or Science Departments, Math, or ISOM may be acceptable. Typically, electives are offered in only one semester and many are not offered every year; check SPIRE to see which courses are each semester.

See the registration notes for a listing of scheduled ME Tech Electives and examples of approved non-MIE Tech Electives.

## ME COURSE TITLES AND NUMBERS

- ENGIN 113 Introduction to Mechanical & Industrial Engineering
- ENGIN 191 First Year Seminar
- MIE 124 Computational Approaches to Engineering Problems (using MATLAB)
- MIE 201 Introduction to Materials Science
- MIE 210 Statics
- MIE 211 Strength of Materials
- MIE 230 Thermodynamics
- MIE 273 Probability and Statistics for Engineers
- MIE 302 ME Lab I
- MIE 310 Dynamics
- MIE 313 Design of Mechanical Components
- MIE 340 Fluid Mechanics I
- MIE 344 System Dynamics
- MIE 354 Heat Transfer
- MIE 375 Manufacturing Processes
- MIE 395A Seminar, Engineering Professionalism
- MIE 402 ME Lab II
- MIE 413 Design of Mechanical Assemblies
- MIE 415 Design of Mechanical Systems

### non-ME COURSE TITLES AND NUMBERS

- Chem 111 Chemistry I
- ECE 361 Introduction to Electrical Engineering
- ENGIN 351 Junior Year Technical Writing
- EnglWP 112 College Writing
- Math 131 Calculus I
- Math 132 Calculus II
- Math 233 Calculus III (Vector Calculus)
- Math 331 Calculus IV (Differential Equations)
- Phys 151 Physics I (Forces, Energy & Work)
- Phys 152 Physics II (Electricity & Magnetism)