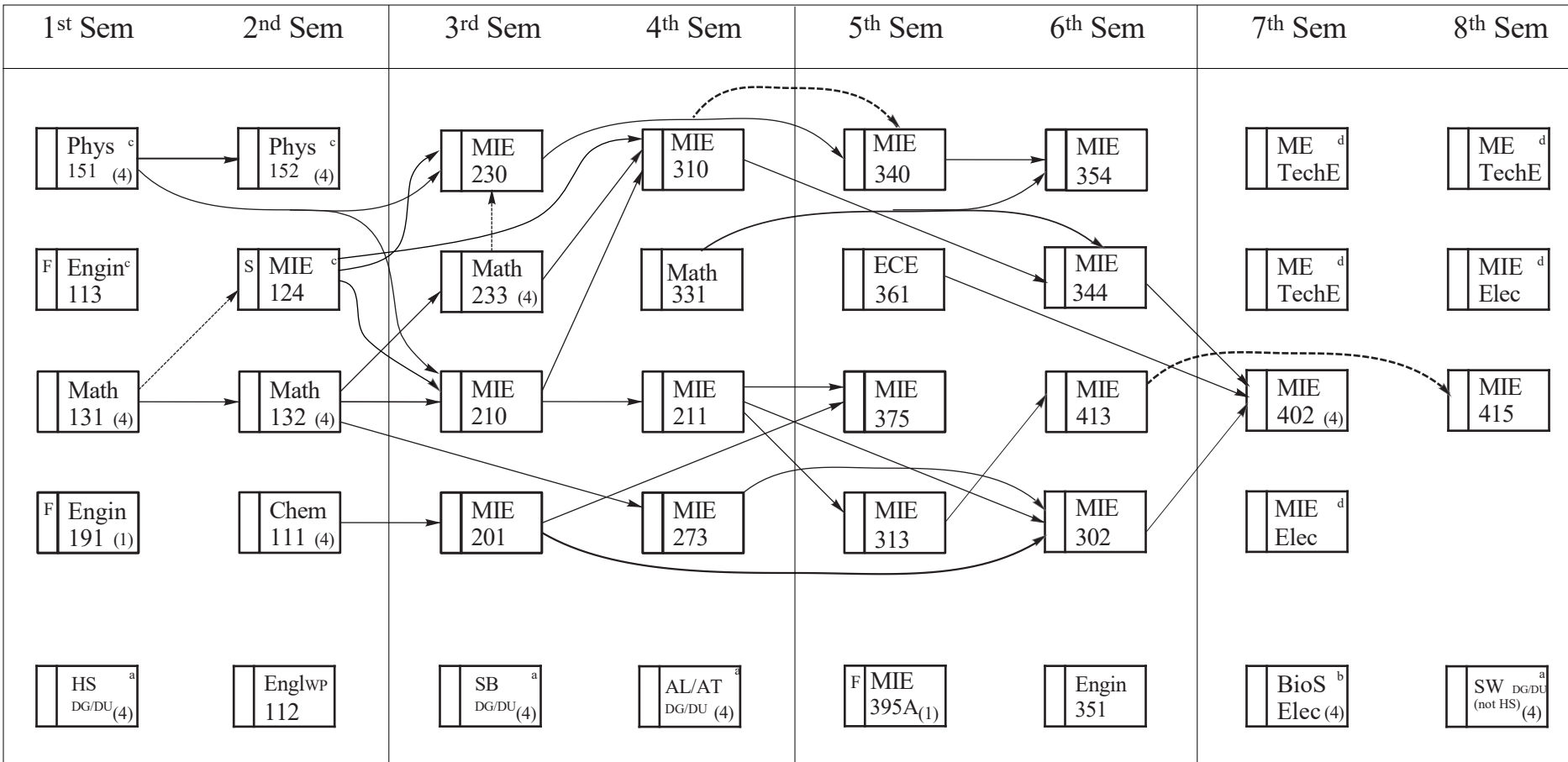


Mechanical and Industrial Engineering Department

Mechanical Engineering Curriculum



If only offered fall (F) or spring (S)

(F) MIE (a) Note on reverse
401 (4) Credits, if other than 3

————→ Prerequisite course

- - - - -> Prerequisite that may be taken concurrently

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: Note that not all students will be able to take MIE 313 during their 5th semester. Students who do not enroll in MIE 313 in their 5th semester should take MIE 302 instead. MIE 313 would then be taken during the 6th semester and move MIE 413 to the 7th semester. Students should replace MIE 413 in the six semester with an elective.

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

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

Total Credits: 125
Revised 7/14/2026

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.

Mechanical Engineering Program Electives: Students must take 3 ME Tech Elective courses and 2 MIE Elective courses. Other upper level engineering courses, including courses in other engineering and related disciplines, may be acceptable as ME Tech Elective courses.

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)