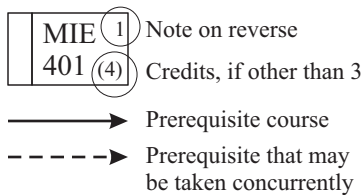
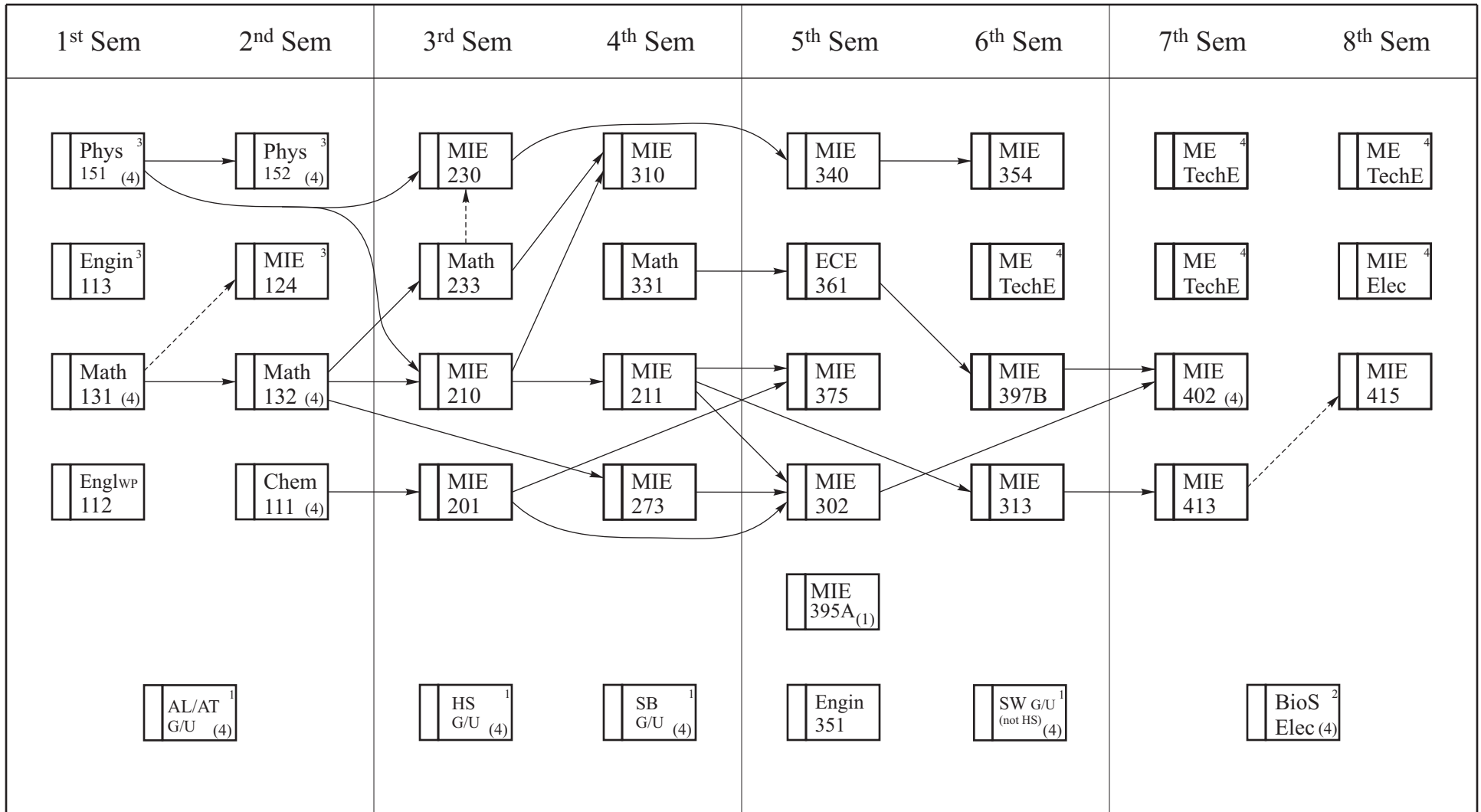


Mechanical and Industrial Engineering Department  
**MECHANICAL ENGINEERING CURRICULUM**  
 Curriculum for students entering the University after 6/2010



**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 prerequisites are shown. Consult SPIRE Course Descriptions for complete listings. Students must satisfy prerequisites or obtain instructor permission, irrespective of SPIRE enrollment.

Total Credits: 123  
Revised 3/15/2017

# 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. Consult the Guide to Undergraduate Programs for more detailed explanations of department, college, and university graduation requirements.

Notes: 1. **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 (G) and one must have a United States diversity designation (U)

- 2. **Biological Science Requirement:** Any 4 cr course having the Biological Science (BS) designation.
- 3. **Alternative Courses:** An approved alternative exists to the “standard” course shown in the flow chart.
- 4. **Mechanical Engineering Program Electives:** Students must take 4 ME Tech Elective courses and one MIE Elective course. Approved ME Tech Elective courses are listed below. Other upper level engineering courses, including courses in other engineering and related disciplines, may be acceptable as ME Tech Elective courses. See Dr. Schliemann for approval. MIE 353 is not considered a ME Tech Elective.

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 offered this semester. See Dr. Schliemann for approval.

**ME TECHNICAL ELECTIVE Courses**

MIE 373	Intro Simulation Methods	MIE 570	Solar & Dir. Energy Conver.
MIE 379	Deterministic Operations Research	MIE 573	Engin. Windpower Systems
MIE 418	Design of Mechanisms	MIE 597B	Mechanical Behavior Of Polymers
MIE 422	Statistical Quality Control	MIE 597I	Injection Molding
MIE 440	Aerospace Fluid Mechanics	MIE 597G	Mechatronics
MIE 444	ME Automatic Controls	MIE 601 <sup>†</sup>	Thermodynamics
MIE 460	Human Factors Engineering	MIE 605 <sup>†</sup>	Finite Element Analysis
MIE 477	Production Planning & Control	MIE 607 <sup>†</sup>	Advanced Fluid Mechanics
MIE 496	Indep. Study (Approval Req'd, 3 cr only)	MIE 608 <sup>†</sup>	Physical Metallurgy
MIE 497E	Thermo-fluid Design	MIE 609 <sup>†</sup>	Mech Properties of Materials
MIE 497S	Super Mileage Vehicle (3 cr only)	MIE 643 <sup>†</sup>	Mechatronic Systems Design
MIE 499Y	Honors Research	MIE 644 <sup>†</sup>	Applied Data Analysis
MIE 499T	Honors Thesis	MIE 680 <sup>†</sup>	Advanced Metal Forming Processing
MIE 551	Thermal Environment Engineering		<sup>†</sup> 600 Level requires instructor approval

**MIE COURSE TITLES AND NUMBERS**

MIE 201	Intro Materials Science	MIE 380	Stochastic Operations Research
MIE 210	Statics	MIE 395A	Seminar, Engineering Professionalism
MIE 211	Strength of Materials	MIE 397B	System Dynamics
MIE 230	Thermodynamics	MIE 413	Design of Mechanical Assemblies
MIE 273	Probability and Statistics for Engineers	MIE 402	ME Lab II
MIE 302	ME Lab I	MIE 415	Design of Mechanical Systems
MIE 310	Dynamics	MIE 418	Design of Mechanisms
MIE 313	Design of Mechanical Components	MIE 422	Statistical Quality Control
MIE 340	Fluid Mechanics I	MIE 444	ME Automatic Controls
MIE 353	Engr Economic Decision Making	MIE 460	Human Factors Engineering
MIE 354	Heat Transfer	MIE 477	Production Planning & Control
MIE 373	Intro Simulation Methods	MIE 478	Capstone Design (IE)
MIE 375	Manufacturing Processes	MIE 492	Seminar
MIE 379	Deterministic Operations Research	MIE 497A	Design Against Failure
		MIE 497E	Thermo-fluid Design