# Mechanical and Industrial Engineering Department

**MECHANICAL ENGINEERING CURRICULUM (ME 2003 - 2009)**

Curriculum for the Classes of 2003 - 2009, entering the ME Major after 1/2001

<table>
<thead>
<tr>
<th>1st Sem</th>
<th>2nd Sem</th>
<th>3rd Sem</th>
<th>4th Sem</th>
<th>5th Sem</th>
<th>6th Sem</th>
<th>7th Sem</th>
<th>8th Sem</th>
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<tbody>
<tr>
<td>Phys 151+3(4)</td>
<td>Phys 152+4(4)</td>
<td>MIE 230</td>
<td>MIE 310</td>
<td>MIE 340</td>
<td>ECE 361</td>
<td>MIE 497E</td>
<td>SD Elec</td>
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<tr>
<td>Engin 113</td>
<td>MIE 124</td>
<td>Math 233</td>
<td>MIE 213</td>
<td>MIE 313</td>
<td>MIE 354</td>
<td>MIE 413</td>
<td>ESD Elec</td>
</tr>
<tr>
<td>Math 131 (4)</td>
<td>Math 132 (4)</td>
<td>MIE 210</td>
<td>MIE 211</td>
<td>MIE 331</td>
<td>MIE 397B</td>
<td>MIE 444</td>
<td>ESD Elec</td>
</tr>
<tr>
<td>EnglWP 112</td>
<td>Chem 111 (4)</td>
<td>MIE 273</td>
<td>MIE 201</td>
<td>MIE 302</td>
<td>MIE 375</td>
<td>MIE 402 (4)</td>
<td>MIE Elec</td>
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<tr>
<td>17 cr</td>
<td>17 cr</td>
<td>16 cr</td>
<td>15 cr</td>
<td>15 cr</td>
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</tbody>
</table>

**Note on reverse**
- 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 Pre-Registration Materials and the MIE Department Pre-Registration Notes.

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

Total Credits: 127

Revised 4/1/2005
Catalog 2001-02 to 2005-06
ME Degree Program, Flowchart Notes

STUDENT NOTE: The flowchart is not the official student record. It should be used in conjunction with your university transcript. Consult the Guide to Undergraduate Programs for more detailed explanations of department, college, and university graduation requirements.

Notes: 1. **Social World Requirement**: 6 COURSES (one from each group)
   1) AL 4) HS or AL or AT or SB or I
   2) SB 5) AL or AT or I
   3) HS 6) SB or I

**Social World Diversity Requirement**
For students who entered the University prior to Fall 2002, two of the six Social World courses must have a Diversity designation (D, G or U)
For students who entered the University during or after Fall 2002, one of the six Social World courses must have global diversity designation (G) and one must have a United States diversity designation (U)

2. **Biological Science Requirement**: Any course having the Biological Science (BS) designation.

3. **Alternative Courses**: An approved alternative exists to the “standard” course shown in the flow chart, e.g. Math 135 can be taken in place of Math 131. Please refer to the catalog.

4. **Mechanical Engineering Program Electives**: Students must take 1 SD course, 2 ESD courses and 1 MIE Elective course. Approved ESD courses are listed below. Other upper level engineering courses, including courses in other engineering and related disciplines, may be acceptable as ESD courses. See Professor Rinderle for approval. All MIE courses at or above the 300 level, including SD and ESD courses, are acceptable as the MIE Elective. Typically technical electives are offered in only one semester and many are not offered every year. Check your registration guide to see which courses are offered this year. If you are interested in using an alternative course as a technical elective, see Professor Rinderle.

**SENIOR DESIGN ELECTIVES (SD Courses)**
MIE 415 Design Of Mechanical Systems
MIE 497A Design Against Failure

**ENGINEERING SCIENCE AND DESIGN ELECTIVES (ESD Courses)**
MIE 373 Intro Simulation Methods  MIE 597G High Tech Ceramics
MIE 379 Operations Research I  MIE 597I Injection Molding
MIE 418 Design of Mechanisms  MIE 597M Customizing CAD Systems
MIE 422 Statistical Quality Control  MIE 601 Thermodynamics
MIE 440 Fluid Mechanics II  MIE 605 Finite Element Analysis
MIE 477 Production Planning & Control  MIE 607 Advanced Fluid Mechanics
MIE 485 Vibrations  MIE 608 Physical Metallurgy
MIE 548 FEA – Introduction  MIE 609 Mech Properties of Materials
MIE 562 Power System Design  MIE 610 Mechanical Metallurgy
MIE 570 Solar & Dir. Energy Conv.  MIE 640 Advanced Dynamics
MIE 573 Engin. Windpower Systems  MIE 643 Mechatronic Systems Design
MIE 574 Adv. Energy Conservation  MIE 644 Applied Data Analysis
MIE 577 Manufacturing Processes Lab  MIE 680 Advanced Metal Forming Processing
MIE 581 Machining & Mechanical Tools  MIE 697B S.T.-Adv. Mechanical Behavior Of Polymers
MIE 597B Mechanical Behavior Of Polymers  MIE 697D S.T.-Advanced Ceramics
MIE 597F CAD/CAM  MIE 697F Modern Control Syntheses

Revised 4/1/05