Minor in Materials Engineering

For the minor, 14–19 semester hours are required, excluding prerequisite courses. Students who wish to minor in Materials Engineering must complete the following:

Prerequisite Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 180</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 181</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 141</td>
<td>General Physics I (Mechanics)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 122</td>
<td>General Chemistry I Lecture</td>
<td>5</td>
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<tr>
<td>&amp; CHEM 123</td>
<td>General Chemistry Laboratory I</td>
<td></td>
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<tr>
<td>or CHEM 116</td>
<td>Honors and Majors General and Analytical Chemistry I</td>
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</tbody>
</table>

Total Hours 17

Some of these courses have prerequisites not included in the minor. Consult the Course Descriptions in the catalog or the Schedule of Classes for course prerequisites.

Required Courses

Select one of the following: 2-3

- CME 260 Properties of Materials
- CME 261 Materials for Manufacturing

Select four of the following: 12-16

- BIOE 460 Materials in Bioengineering
- CHE 440 Non-Newtonian Fluids
- CHE 494 Selected Topics in Chemical Engineering (when topic is Design of Microelectronics Processing)
- CME 433 Fracture Mechanics and Failure Analysis I
- CME 460 Crystallography and X-Ray Diffraction
- CME 470 Physical and Mechanical Properties of Materials
- CME 471 Thermodynamics of Materials
- CME 480 Welding Metallurgy
- ECE 346 Solid State Device Theory
- ECE 347 Integrated Circuit Engineering
- ECE 449 Microdevices and Micromachining Technology
- ME 380 Manufacturing Process Principles
- PHYS 481 Modern Experimental Physics I

Total Hours 14-19