MINOR IN MANUFACTURING

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The manufacturing minor is for mechanical engineering students who seek a career in manufacturing. Students will learn about design for manufacturing, manufacturing processes and robotics systems. This minor will prepare students to solve manufacturing problems and improve current manufacturing processes. Students will be able to apply appropriate theories and methods to analyze and design manufacturing technologies and systems within realistic constraints (e.g., economic, manufacturability, sustainability, environmental) and communicate effectively about manufacturing engineering problem solutions, technologies and system designs.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MER 250</td>
<td>Computer Aided Design</td>
<td>3</td>
</tr>
<tr>
<td>MER 340</td>
<td>Manufacturing/Machine Component Design</td>
<td>3</td>
</tr>
<tr>
<td>MER 490</td>
<td>Engineering Professional Experience</td>
<td>0-1</td>
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Select One of the Following Tracks

1. **Mechatronics/Robotics**

   Required Courses
   - MER 475  Mechatronics 3
   - IER 370  Industrial Robotics (MER 375) 3

   Select one of the following courses 1-3
   - IER 220  Production Systems (MER 225)
   - IER 230  Lean Systems Engineering (MER 235)
   - IER 240  Physical Human Factors and the Workplace (MER 245)
   - IER 360  Operations Planning and Control
   - IER 375  Statistical Process Control

2. **Production and Process Improvement**

   Take three of the following courses 7-9
   - IER 220  Production Systems (MER 225)
   - IER 230  Lean Systems Engineering (MER 235)
   - IER 240  Physical Human Factors and the Workplace (MER 245)
   - IER 360  Operations Planning and Control
   - IER 370  Industrial Robotics (MER 375)
   - IER 375  Statistical Process Control

3. **Six Sigma**

   Take the following two courses
   - IER 492  Six Sigma - Black Belt Project Exp I 3
   - IER 497  Six Sigma - Black Belt Project Exp II 3

   Take one of the following courses 1-3
   - IER 220  Production Systems (MER 225)
   - IER 230  Lean Systems Engineering (MER 235)
   - IER 240  Physical Human Factors and the Workplace (MER 245)