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>
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<tbody>
<tr>
<td></td>
<td><strong>Required Courses</strong></td>
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<tr>
<td>MER 250</td>
<td>Computer Aided Design</td>
<td>3</td>
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<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 Experience 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)