Degree: Industrial Engineering, B.S.

### Requirement Area

#### First Semester

<table>
<thead>
<tr>
<th>Requirement Area</th>
<th>Course</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD Major/B4</td>
<td>MATH 130</td>
<td>Calculus I</td>
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<td>4</td>
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<tr>
<td>B1/B3 LD Major</td>
<td>ENGL 102</td>
<td>General Chemistry for Engineering</td>
<td>MATH 130 or MATH 125 (either course with grade C- or better).</td>
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<tr>
<td>A2</td>
<td>PHYS 135</td>
<td>Physics for Scientists and Engrs. I</td>
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<td>One from the following: Satisfactory score of 78 or higher on Mathematics Placement Exam, MATH 120 or MATH 125 (either course with grade C- or better).</td>
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### Second Semester

<table>
<thead>
<tr>
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<th>Course</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>LD Major</td>
<td>PHYS 136</td>
<td>Physics for Scientists and Engrs. II</td>
<td>MATH 130 and PHYS 135.</td>
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<tr>
<td>A2</td>
<td>ENGR 200</td>
<td>Introduction to Engineering and Design</td>
<td>MATH 130 with grade C- or better.</td>
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<tr>
<td>LD Major</td>
<td>ENGR 210</td>
<td>Manufacturing Materials and Processes</td>
<td>ENGR 100 and ENGR 200</td>
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<thead>
<tr>
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<th>Course Title</th>
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<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>MATH 210</td>
<td>Linear Alg. With Differential Eq</td>
<td>MATH 130.</td>
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<tr>
<td>B2/Sustainability</td>
<td>ENGR 220</td>
<td>Statics</td>
<td>PHYS 135.</td>
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<tr>
<td>LD Major</td>
<td>INDE 350</td>
<td>Engr. Statistics and Prob.</td>
<td>MATH 130.</td>
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<th>Course</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Units</th>
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<tbody>
<tr>
<td>A3</td>
<td>PSYC 100</td>
<td>General Psychology</td>
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<tr>
<td>D1/LD Major</td>
<td>ENGR 215</td>
<td>Computer Methods in Engr.</td>
<td>MATH 131.</td>
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<tr>
<td>LD Major</td>
<td>ENGR 230</td>
<td>Electric Circuits I</td>
<td>PHYS 136 and MATH 131.</td>
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<td>LD Major</td>
<td>INDE 340</td>
<td>Design of Engr. Experiments</td>
<td>INDE 330 or STAT 316.</td>
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<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Code 1/D2</td>
<td>ENGR 320</td>
<td>Engr. Economics</td>
<td>MATH 130.</td>
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<td>B6/LD Major</td>
<td>INDE 390</td>
<td>Human Factors and Work Methods</td>
<td>INDE 330 or STAT 100;</td>
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<tr>
<td>UD Major</td>
<td>INDE 360</td>
<td>Operations Research</td>
<td>MATH 131.</td>
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### Sixth Semester

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<th>Prerequisites</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD Major</td>
<td>INDE 410</td>
<td>Facilities Plan. Dsgn. and Mat. Handling</td>
<td>ENGR 210.</td>
<td>3</td>
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<tr>
<td>LD Major</td>
<td>INDE 430</td>
<td>Design of Work Systems</td>
<td>INDE 390.</td>
<td>4</td>
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<tr>
<td>LD Math</td>
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<td>student choice</td>
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<td>C2</td>
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### Seventh Semester

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</thead>
<tbody>
<tr>
<td>Code 2/D3</td>
<td>INDE 420</td>
<td>Discrete Event Simulation</td>
<td>ENGR 215, and INDE 340</td>
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<tr>
<td>LD Major</td>
<td>INDE 440</td>
<td>Sustainable Production and Supply Systems</td>
<td>INDE 360, and either</td>
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<tr>
<td>UD Math</td>
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<td>student choice</td>
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### Eighth Semester

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<th>Units</th>
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</thead>
<tbody>
<tr>
<td>D4/Diversity Overlay</td>
<td>INDE 450</td>
<td>Systems Quality and Reliability</td>
<td>ENGR 210, and either</td>
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<tr>
<td>UD Major</td>
<td>INDE 460</td>
<td>Service &amp; Mns. Systems Modeling</td>
<td>INDE 360</td>
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<tr>
<td>UD Major</td>
<td>INDE 492</td>
<td>Senior Design</td>
<td>Completion or</td>
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</table>

Total Units: 122

### General Education & University Requirements - Suggested Courses

- **Area A (9 units): Communication in the English Language & Critical Thinking**
  - A1. COMM 100 or 104
- **Area B (9 units): Scientific Inquiry & Quantitative Reasoning**
  - B1. Physical Science
  - B2. Life Science
  - B3. Laboratory Activity
  - B4. Quantitative Reasoning (Must earn passing grade of C-/CR or better)
- **Area C (9 units): Arts & Humanities - Minimum of three different disciplines as designated by course prefix (e.g., ART, THEA, MUS)
  - C1. Arts
  - C2. Humanities
- **Area D (9 units): Social Sciences - Minimum of three different disciplines as designated by course prefix (e.g., ANTH, ECON, PSYC)**
  - D1.
  - D2.
  - D3.
  - D4. Upper-division Social Sciences
- **Overlay Requirements (9 units): Courses may be upper or lower division, and must be completed before attaining junior standing.**
  - UWSR. Writing Skills Test (WST) or First and/or Second Tier Courses
  - U.S. Code (American Institutions Requirement) - Two courses (6 units)
    - Code 1.
    - Code 2.
  - U.S. Code (American Institutions Requirement) - Two courses (6 units)
    - Code 3.
    - Code 4.
  - U.S. Code (American Institutions Requirement) - Two courses (6 units)
    - Code 5.
  - U.S. Code (American Institutions Requirement) - Two courses (6 units)
    - Code 6.
  - U.S. Code (American Institutions Requirement) - Two courses (6 units)
    - Code 7.
  - U.S. Code (American Institutions Requirement) - Two courses (6 units)
    - Code 8.
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    - Code 55.
  - U.S. Code (American Institutions Requirement) - Two courses (6 units)
    - Code 56.