Manufacturing Engineering Technology B.S. Course Sequence (Typical)
Undergraduate Catalog - 2015/2016
Total undergraduate credits 124

<table>
<thead>
<tr>
<th>Freshman (fall)</th>
<th>Freshman (Spring)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ENGL103 - Composition I</td>
<td>4 MATH 229 - Calculus I</td>
</tr>
<tr>
<td>3 COMS 100 - Fundamentals of Oral Communication</td>
<td>3 ENGL 203 - Composition II</td>
</tr>
<tr>
<td>3 CHEM 110 - Chemistry or CHEM 210 - General Chem I</td>
<td>3 TECH 265 - Basic Manufacturing Processes</td>
</tr>
<tr>
<td>1 CHEM 111 - Chem Lab or CHEM 212 - Gen Chem Lab I</td>
<td>3 TECH 262 - Machine Production Processes</td>
</tr>
<tr>
<td>3 MATH 155 - Trigonometry</td>
<td>4 PHYS 210 - General Physics I</td>
</tr>
<tr>
<td>3 TECH 211 - Computer-Aided-Design</td>
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<td>16</td>
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<thead>
<tr>
<th>Sophomore (fall)</th>
<th>Sophomore (Spring)</th>
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<tbody>
<tr>
<td>4 MATH 230 - Calculus II</td>
<td>2 TECH 210 - Engineering Mechanics</td>
</tr>
<tr>
<td>3 TECH 175 - Electronics and Electricity Fundamentals</td>
<td>2 TECH 212 - Engineering Dynamics</td>
</tr>
<tr>
<td>1 TECH 175A - Electronics &amp; Electricity Fund Lab</td>
<td>3 TECH 295 - Mfg Comp Apps or CSCI 215 - Visual Basic or CSCI 240 - Comp Prog in C++</td>
</tr>
<tr>
<td>3 STAT 208 - Basic Stats or STAT 301 - Elementary Stats</td>
<td>3 TECH 311 - Computer-Aided Modeling</td>
</tr>
<tr>
<td>3 General Education Requirement 1</td>
<td>3 Manufacturing Processes Elective 1</td>
</tr>
<tr>
<td></td>
<td>3 General Education Requirement 2</td>
</tr>
<tr>
<td>14</td>
<td>16</td>
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<thead>
<tr>
<th>Junior (fall)</th>
<th>Junior (Spring)</th>
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</thead>
<tbody>
<tr>
<td>3 TECH 369 - Strength of Materials</td>
<td>3 TECH 328 - Fluid Mechanics/Lab</td>
</tr>
<tr>
<td>3 TECH 425 - Programmable Electronic Controllers</td>
<td>3 TECH 342 - Manufacturing Component Design</td>
</tr>
<tr>
<td>3 TECH 391 - Industrial Quality Control</td>
<td>3 TECH 443 - Engineering Economy</td>
</tr>
<tr>
<td>3 Engl 308 - Tech Writing or Mgmt 346 - Bus Comms</td>
<td>3 Manufacturing Processes Elective 2</td>
</tr>
<tr>
<td>3 General Education Requirement 3</td>
<td>3 General Education Requirement 4</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
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<table>
<thead>
<tr>
<th>Senior (fall)</th>
<th>Senior (Spring)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 TECH 393 - Structure and Properties of Materials</td>
<td>3 TECH 362 - Numerical Control Systems</td>
</tr>
<tr>
<td>3 TECH 415 - Applied Industrial Experimental Analysis</td>
<td>3 TECH 423 - Automated Manufacturing Systems</td>
</tr>
<tr>
<td>3 TECH 420 Computer-Integrated Manufacturing</td>
<td>3 TECH 478 - Egr Tech Senior Design Project II</td>
</tr>
<tr>
<td>1 TECH 477 - Egr Tech Senior Design Project I</td>
<td>3 Manufacturing Systems Elective 2</td>
</tr>
<tr>
<td>3 Manufacturing Systems Elective 1</td>
<td>3 General Education Requirement 6</td>
</tr>
<tr>
<td>13</td>
<td>15</td>
</tr>
</tbody>
</table>

Manufacturing Systems Electives (2 courses)
- TECH 305 - Green Technologies
- TECH 404 - Supervision in Industry
- TECH 406 - Facilities Management Technology
- TECH 409 - Internship
- TECH 429 - Plant location, Layout, and Materials Handling
- TECH 434 - Human Factors in Industrial Accident Prevention
- TECH 442 - Work Simplification and Measurement
- TECH 444 - Production Control Systems
- TECH 484 - Energy Management
- TECH 492 - Manufacturing Distribution Applications
- TECH 496 - Industrial Project Management

Manufacturing Processes Electives (2 courses)
- TECH 260 - Metal Fabrication Processes
- TECH 312 - Design Dimensioning and Tolerancing
- TECH 313 - Product Design & Development for Manufacturability
- TECH 344 - Materials and Processes in the Plastics Industry
- TECH 355 - Metrology
- TECH 416 - Heating, Ventilating, and Air Cond Tech
- TECH 417 - Design for Energy Efficiency and Green Materials
- TECH 427 - Testing Methods, Procedures, & Selection of Sustainable Plastics
- TECH 479 - Special Topics in Engineering Technology
2015/2016 NIU Catalog
Manufacturing Engineering Technology
Credits Required for Graduation 124

Note: Semester offering and prerequisites may change, the current bulletin and schedule should be consulted

Legend - p - prerequisite  c-corequisite  f - fall semester  s - spring semester

**Required Technology Courses**

- **Tech175** pMath155, Phys210
- **Tech175a** or Tech175
- **Elect 210** pPhys210 or 253 & Tech229
- **Chem 110** or Chem210
- **Math 155**
- **Tech 211**
- **Tech 212T**
- **Tech 262**
- **Tech 265**
- **Tech 295** pMath155, Tech265 or Csci215
- **Tech 326** pMath230, Phys210
- **Tech 327**
- **Tech 329**
- **Tech 342** pMath230, Tech211, T212, T369
- **Tech 362** pTech262, T211, T213, T369
- **Tech 369** pMath229, Tech210
- **Tech 391** pMath 155, Stat 208 or 301
- **Tech 393** pTech265, Chem110 or Chem210
- **Tech 415** pMath 155, Stat 208
- **Tech 420** pTech 315
- **Tech 427**
- **Tech 443** pMath155
- **Tech 444**
- **Tech 446** pMath155
- **Tech 447** pMath155
- **Tech 449** pMath155
- **Tech 462** pTech262, T295 or Csci215 or 240
- **Tech 477** pEng 308, Tech 342, Tech 369, Tech 391
- **Tech 478** pTech 477
- **Tech 479**

**Technology Department Electives**

Manufacturing Systems - Choose 2 courses

- **Tech 305** pMath 155, Chem 110
- **Tech 344** pMath155 & Tech265
- **Tech 393** pTech265, Tech211, Math155
- **Tech 415** pMath 155, Stat 208
- **Tech 420** pTech 315
- **Tech 427**
- **Tech 443** pMath155
- **Tech 444** pMath155 & Tech265
- **Tech 449** pMath155
- **Tech 462** pTech262, T295 or Csci 215 or 240
- **Tech 477** pEng 308, Tech 342, Tech 369, Tech 391
- **Tech 478** pTech 477

Manufacturing Processes - Choose 2 courses

- **Tech 260** pTech 211, Math155
- **Tech 312** pTech 211, Tech260 or Tech 265
- **Tech 313** pMath 155, Tech 311, Tech 265
- **Tech 344** pMath 155, Tech 269, Chem 110
- **Tech 365** pTech 211, Math155
- **Tech 416** pMath 155, Phys 210
- **Tech 417** pMath 155, Phys 210
- **Tech 427**
- **Tech 479** psee My NIU

**General Education Knowledge Domain Courses** - See CEET website or online Undergraduate Catalog

Creativity & Critical Analysis - 2 courses

- (3)

Society & Culture - 2 courses

- (3)

From any of the Knowledge Domain Areas

- (3)