## Manufacturing Engineering Technology degree map

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>16 cr</th>
<th>Semester 2</th>
<th>15 cr</th>
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<tbody>
<tr>
<td>MATH 112 Algebra -3 (LE-4)</td>
<td></td>
<td>MATH 211 Applied Calculus I -3</td>
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<tr>
<td>GENG 101 Intro to Engineering -3 (LE-9)</td>
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<td>ENGL 191 Rhetorical &amp; Analytical Writing -4 (LE-1)</td>
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<tr>
<td>CMST 192 Intro Communication -3 (LE-1)</td>
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<td>PHYS 231 General Physics -4 (LE-3)</td>
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<tr>
<td>CHEM 210 General Chemistry I -4 (LE-3)</td>
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<td>PHYS 234</td>
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<tr>
<td>ETS 115 Engineering Communications -3</td>
<td>15 cr</td>
<td>ETS 156 Intro Env &amp; Tech Studies -1</td>
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<td><strong>Total</strong>: 15 cr</td>
<td><strong>Total</strong>: 14 cr</td>
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<th>Semester 3</th>
<th>15 cr</th>
<th>Semester 4</th>
<th>14 cr</th>
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<tbody>
<tr>
<td>GENG 102 Engg Problem Solving -3</td>
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<td>ETS 183 Tech &amp; Third World -3 (LE-5,8, D)</td>
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<tr>
<td>ETS 260 Environmental Studies -3 (LE-10)</td>
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<td>ETS 242 Thermo/Fluids -3</td>
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<td>ETS 240 Metrology -2</td>
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<td>ETS 243 Strength of Materials -3</td>
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<tr>
<td>ETS 241 Statics/Dynamics -3</td>
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<td>STAT 239 Statistics for Physical Sciences -3</td>
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<td>ETS 345 Manufacturing Processes -3</td>
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<td>Technical Elective -3</td>
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<td>Econ 205</td>
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<th>Semester 5</th>
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<tbody>
<tr>
<td>Liberal Ed Elective -3 (LE-2)</td>
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<td>ETS 340 Continuous Improvement -3</td>
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<tr>
<td>ETS 314 Design for Manufacturability -3</td>
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<td>ETS 343 Computer Integrated Mfg -3</td>
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<tr>
<td>ETS 348 Plastics Manufacturing -3</td>
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<td>GENG 360 Engineering Economics -2</td>
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<tr>
<td>ECON 205 or 206 -3 (LE-5)</td>
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<td>GENG 380 Engineering Communication -2</td>
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<td>Technical Elective -3</td>
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<td>Technical Elective -3</td>
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<td>MATH 222</td>
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<td>Technical Elective -2</td>
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<th>Semester 7</th>
<th>15 cr</th>
<th>Semester 8</th>
<th>15 cr</th>
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<tbody>
<tr>
<td>Liberal Ed Elective -3 (LE-6, D)</td>
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<td>Liberal Ed Elective -3 (only 1 option) (LE-6,7, D)</td>
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<tr>
<td>ETS 440 Production Systems Control -3</td>
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<td>ETS 446 Mfg Concepts -3</td>
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<td>ETS 448 Composite Materials -3</td>
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<td>↑ENGL184, CMTY222</td>
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<td>ETS 470 Capstone -3</td>
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<td>ETS 471 Capstone -3</td>
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<td>Technical Elective -3</td>
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<td>ECE 220</td>
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<td>Technical Elective -3</td>
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**Technical Electives:**

20 credits of technical electives are required. At least 6 of these credits must be at the 300-400 level.

### Production Systems

- ETS 310 Management for Engr, Sci, & Tech (3)
- ETS 374 Production Technology (3)
- ETS 430 Mass Production (3)
- MME 464 Process and Tool Design (3)
- MME 470 Facilities Planning/Material Handling (3)

### Environment

- ETS 363 Resource Management (3)
- ETS 367 Environmental Regulation (3)
- ETS 373 Environmental & Tech Assessment (3)
- ETS 375 Society and the Environment (3)
- ETS 468 Waste Management Systems (3)

### Analytics

- STAT 321 Statistical Methods II (3)
- STAT 360 Intro to Data Visualization (3)
- STAT 421 Design of Experiments (3)
- MATH 212 Survey of Calculus II (3)

### Energy/Electricity

- ETS 185 Energy Resources and Issues (3)
- ETS 270 Electronics Technology (3)
- ETS 388 Transportation/Energy Technology (3)
- ETS 482 Renewable/Nondepletable Energy (3)

### Professional Experience

- ETS 414 Topics in Technology (1-6 credits)
- ETS 444 Internship (limit 4 credits)

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*Revised April 2017*
Manufacturing Engineering Technology degree map

Required Technical Courses:
- ETS 115 Engineering Communications (3)
- ETS 156 Intro to ETS (1)
- ETS 240 Metrology (2)
- ETS 241 Applied Statics and Dynamics (3)
- ETS 242 Applied Thermodynamics & Fluid Mechanics (3)
- ETS 243 Strength of Materials (3)
- ETS 312 Computer-Aided Design (3)
- ETS 314 Design for Manufacturability (3)
- ETS 340 Continuous Improvement (3)
- ETS 343 Computer Integrated Manufacturing (3)
- ETS 345 Metalworking Processes (3)
- ETS 348 Plastics Manufacturing (3)
- ETS 440 Production Systems Control (3)
- ETS 446 Manufacturing Concepts (3) or 447
- ETS 448 Composite Materials (3)
- ETS 470 Senior Project (Capstone) I (3)
- ETS 471 Senior Project (Capstone) II (3)

Required General Courses
- MATH 211 Applied Calculus I or MATH 221 (3)
- STAT 239 Statistics for Physical Sciences (3)
- GENG 101 Ethics & the Engineering Prof (3)
- GENG 102 Engineering Problem Solving (3)
- GENG 380 Engineering Communication (2)
- GENG 360 Engineering Economics (2)
- CHEM 210 General Chemistry 1 (4)
- PHYS 231 General Physics 1 (4)
- ETS 183 Technology & Third World Dev (3)
- ECON 205 or 206 Macro/Micro (3)
- ETS 260 Intro to Env Studies (3)

Liberal Education Courses
Goal Area 1 (Communication):
- ENGL 191 Introduction to Rhetorical and analytical Writing (4)
- CMST 192 Introduction to Communication Studies (3)

Goal Area 2 (Critical Thinking):
- One elective

Goal Area 3 (Natural sciences):
- CHEM 210 General Chemistry 1 (4)
- PHYS 231 General Physics I (4)

Goal Area 4 (Mathematical/Logical Reasoning):
- MATH 211 Applied Calculus I (3) or MATH 221 Calculus I

Goal Area 5 (History and the Social and Behavioral Sciences):
- ETS 183 Technology and Third World Development (3)
- ECON 205 Principles of Macroeconomics or ECON 206 Principles of Microeconomics (3)

Goal Area 6 (The Humanities and Fine Arts):
- Two electives

Goal Area 7 (Human Diversity):
- One elective

Goal Area 8 (Global Perspectives):
- ETS 183 Technology and Third World Development (3)

Goal Area 9 (Ethical and Civic Responsibility):
- GENG 101 Ethics and the Engineering Profession (3)

Goal Area 10 (People and the Environment):
- ETS 260 Introduction to Environmental Studies (3)

Revised April 2017