Applied Manufacturing Technology includes the planning, management, and processing of materials into intermediate or final products as well as professional and technical support activities such as production planning and control, maintenance and manufacturing process engineering. Demand for skilled employees is growing rapidly in this field.

Manufacturing Technology Occupations in Highest Demand (P-20 Network, 2015)
- Chemical engineer
- Electrical engineer
- Electronics engineer
- Health, safety, environmental assurance
- Industrial engineer
- Labor relations manager
- Logistician
- Maintenance and repair workers
- Manufacturing engineer
- Materials engineer
- Mechanical engineer
- Operations manager
- Quality control technician
- Production manager
- Team assembler

Potential Careers in Manufacturing Engineering Technology (Rock Valley College)
- Product design
- 3-D CAD modeling
- Process planning
- Automated production
- Technical sales

Graduates with a Bachelor of Science, Applied Manufacturing Technology (NIU), find careers at companies like
- AON
- Caterpillar
- Chrysler
- Conner-Winfield
- Hamilton Sundstrand (UTC Aerospace Systems)
- Ideal Industries
- Ingersoll
- Motorola
- Siemens
- Underwriters Labs
- Woodward

Did you know...
Analysts project 1,000,000 manufacturing vacancies by the year 2020.
Source: The 2014 Boeing Pilot & Technician Outlook

The average US Manufacturing worker earns more than $77,000…almost 25% more than other sectors.
Source: National Association of Manufacturers

The fastest-growing jobs in the Rockford area are in the manufacturing of transportation equipment, electrical equipment, appliances, and components.
Source: Regional P-20 Network Emerging Jobs Report

All required 300-400 courses in NIU’s Applied Manufacturing Technology program are offered online.

See back panel for more specific program requirements >>

Your pathway to completion

4 Semesters
Coursework at Rockford Public Schools –
EMITT Academy Manufacturing Operations Pathway

6 Semesters
Coursework at Rock Valley College
Associates Degree – Manufacturing Engineering Technology

2 Semesters
Coursework at Northern Illinois University
Bachelor of Science in Technology, Applied Manufacturing Technology (online)

General Contact Information
### Applied Manufacturing Technology Pathway

The table below shows the courses that, if taken in this sequence, should result in completion of the program in the least amount of time while evenly distributing the course load. Some courses are prerequisites for the courses that follow in the sequence and are subject to change. Please consult your institution's advising staff for the latest program requirements when registering for courses. Missing coursework will hinder a students' progress in the program. To progress seamlessly from one institution to the next, students should obtain a degree from the first institution. All plans of study should meet local and state high school graduation requirements, general education requirements, and prerequisites for advanced courses.

To read this table -
Each column represents a single grade year or semester as noted. Summer coursework may be necessary for some students. All information is taken from online published materials by each institution on its website in the late summer of 2015.

#### RPS 205 - EMITT Academy Manufacturing Operations Pathway

<table>
<thead>
<tr>
<th>RVC - Manufacturing Engineering Technology</th>
<th>Semester 1</th>
<th>Semester 2</th>
<th>Semester 3</th>
<th>Semester 4</th>
<th>Semester 5</th>
<th>Semester 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Algebra Part II (MTH-092); prerequisite MTH 091</td>
<td>Manufacturing Processes I (MET-110)</td>
<td>CNC Machine Setup/Operations/Programming (MET-111)</td>
<td>Hydraulics, Pneumatics and PLCs (MET-146)</td>
<td>DC/AC Circuits and Electronics I (EET-141)</td>
<td>Robotics and Automated Systems (EET-254)</td>
<td></td>
</tr>
<tr>
<td>Intermediate Algebra Part II (MTH 094 2 credits) or Combined Beg &amp; Intermediate Algebra (MTH 096S 6 credits)</td>
<td>Introductory CAD and Print Reading (MET-100)</td>
<td>Graphics/SolidWorks CAD I (MET-133)</td>
<td>Strength of Materials (MET-218)</td>
<td>Applied Physics (MET-162)</td>
<td>MET Capstone Project (MET-249)</td>
<td></td>
</tr>
<tr>
<td>Fabrication I (only at Auburn, Guilford)</td>
<td>Metrology (MET 106)</td>
<td>Statics (MET-217)</td>
<td>Mechanisms (MET-220) for MD emph. OR CNC/CAM Operations I (MET-226) for AP emphasis</td>
<td>Machine Design (MET-221) for MD emph. OR Manufac- ture Methods, Process Plan &amp; Syst (MET-247) for AP emphasis</td>
<td>Facilities Management Technology (TECH 406)</td>
<td>Manufacturing Distribution Applications (TECH 492)</td>
</tr>
<tr>
<td>Fabrication II &amp; III (only at Auburn)</td>
<td>Composition I (ENG-101)</td>
<td>Materials and Processes (MET-105)</td>
<td>Composition II (ENG-103) or Introduction to Technical writing (ENG-110)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plane Trigonometry (MTH-125) or College Algebra &amp; Trigonometry (MTH-132)</td>
<td>Continuous improvement in Manufacturing (MET-243)</td>
<td>Technical writing (ENG-110)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundamentals of Communication (SPH-131)</td>
<td>Emphasis in Mechanical Design or Automated Production should be chosen by the end of Semester 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Recommended out of school experiences in workplaces, weekend and summer activities:

For more information about Rockford Public Schools – EMITT Academy Manufacturing Operations Pathway, contact Dave Carson, Executive Director, College and Career Readiness 815-966-3123.

For more information about the Rock Valley College Manufacturing Engineering Technology program, contact Ron Geary, Vice President, Career and Technical Education/Outreach 815-921-3101.

For more information about NIU’s Bachelor of Science, Applied Manufacturing Technology program, contact Stacey Deegan, Technology Program Advisor 815-753-9943.