Mechanical Engineering Pathway Model

Mechanical engineers design, develop, build, and test mechanical and thermal sensors and devices, including tools, engines, and machines.

Potential Careers in Mechanical Engineering
- Astrophysicist
- Biomedical engineer
- CAD technician
- Quality engineer
- Structural engineer
- Survey technician
- Systems engineer
- Rail Engineer
- Design Engineer
- Fluid Dynamics Engineer

Where Mechanical Engineers Work
- The Boeing Company
- Ford Motor Company
- GE Aviation
- Google
- National Aeronautics and Space Administration (NASA)
- US Department of Energy
- Walt Disney Company
- Exelon

2014 median pay nationwide - $83,060 annually for mechanical engineers

Your pathway to completion

4 Semesters Rockford Public Schools – Engineering, Manufacturing, Industrial and Trades Technology (EMITT) Academy Engineering Pathway
4 Semesters Rock Valley College Associate in Engineering Science
4 Semesters Northern Illinois University Bachelor of Science in Mechanical Engineering

Did you know...
Industries that use mechanical engineers are involved in robotics, computer aided design/manufacturing (CAD/CAM), automotive/transportation, air-conditioning and refrigeration, and machine-to-machine interaction or machine-to-human interaction.
Source: Department of Mechanical Engineering, College of Engineering and Engineering Technology, Northern Illinois University

Mechanical engineering is one of the broadest engineering disciplines.
Source: Bureau of Labor Statistics

In 2014, there were 3,919 open mechanical engineering jobs in Chicago
Source: Career Builder

See back panel for more specific program requirements >>
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 student’s 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.

<table>
<thead>
<tr>
<th>EMITT Academy Manufacturing Engineering Pathway</th>
<th>RVC - Manufacturing Engineering Technology</th>
<th>NIU - Bachelor of Science, Applied Manufacturing Technology</th>
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<tbody>
<tr>
<td>Grade 9</td>
<td>Grade 10</td>
<td>Grade 11</td>
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<td>English</td>
<td>English</td>
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<td>Physical Education/Health</td>
<td>Physical Education</td>
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<td>Freshman Seminar</td>
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Students must earn 48 total credits in order to graduate from Rockford Public Schools. Recommended: career-related and workplace experiences after school, weekends, and summers. *These courses have specific course prerequisites that are not shown above and may require additional credit hours to be taken by the student. *Technical Electives are not offered every semester. They should be taken whenever they are available.

For more information about Rockford Public Schools – EMITT Academy Manufacturing Operations Pathway, contact Dave Carson Executive Director, College and Career Readiness david.carson@rps205.com 815-966-3123

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

For more information about NIU’s Bachelor of Science, Applied Manufacturing Technology program, contact Amanda Walsh, Director, Academic Advising for College of Engineering and Engineering Technology awalsh8@niu.edu 815-753-8071