Students (Grades 8-12) and Parents are invited to a virtual ENGINEERING & INDUSTRIAL TECHNOLOGY Career Pathways Information Session

Learn from employers & other experts about:

- Careers in Engineering, Transportation and Logistics, Construction, and Manufacturing
- Education, Training and Skills Needed
- Local Industry Insights

Thursday, November 19 from 6:30 PM – 7:30 PM

Register in advance for this Zoom webinar: http://bit.ly/EITZoom
Engineering & Industrial Technology

**PATHWAY**

**Career Cluster Areas**
- Manufacturing
- Transportation, Distribution & Logistics
- Architecture & Construction
- Engineering

Do you enjoy working with your hands, building and fixing things? Would you describe yourself as practical and logical? Are you interested in studying science, drafting, robotics, woodworking or math? In your free time, do you like to use technology, work on cars or mechanical things? If you answered yes to some of these questions, then a career in Engineering and Industrial Technology might be right for you.

For additional information related to these Career Clusters, visit [https://www.pacareerzone.org/clusters](https://www.pacareerzone.org/clusters)

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**Erie County**

**In-Demand Occupations & Average Entry-Level Wages* (2018-2024)**

*Actual wages grow with additional education & training*

<table>
<thead>
<tr>
<th>Post-Secondary/Associate Degree</th>
<th>High School / Short Term &amp; Moderate OJT</th>
</tr>
</thead>
</table>
| **Automotive Service Technicians & Mechanics** | **Carpenter****
$23,800 | $28,600 |
| **Electro-Mechanical Technicians*** | **Operating Engineer & Other Construction**
$53,768 | **Maintenance & Repair Workers**
$23,400 | **$30,000**
| **Operating Engineer & Other Construction**
$30,000 | **Construction Laborers**
$23,600 | **$23,600**
| **Carpenter**** | **Welding, Cutters, Solderers & Brazers**
$30,000 | **$30,000**
| **Carpenter** | **Maintenance & Repair Workers**
$23,400 | **$23,400**
| **Welding, Cutters, Solderers & Brazers** | **Heavy & Tractor Trailer Truck Drivers**
$23,200 | **$31,800**
| **Maintenance & Repair Workers** | **Electrician**
$23,400 | **$39,200**
| **CNC Operators, Metal & Plastic** | **Process Technician***
$23,200 | **$34,900**
| **CNC Operators, Metal & Plastic** | **Bachelor / Graduate Degree**
$23,200 | **General & Operations Manager**
**$60,400**
| **Bachelor / Graduate Degree** | **Engineering**
**$53,900**

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*Entry level wages as reported in 2019**

**Could require longer term training**

***Reported by local employers

Engineering & Industrial Technology Pathway

This Pathway is designed to cultivate students’ interest, awareness and application to careers related to technologies necessary to design, develop, install, and maintain physical systems.

<table>
<thead>
<tr>
<th>Are you interested in...</th>
<th>Can you...</th>
<th>Do you enjoy...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building and construction</td>
<td>Apply science and math to the real world</td>
<td>Travel</td>
</tr>
<tr>
<td>Tools, equipment and materials</td>
<td>Read and understand directions</td>
<td>Working with your hands</td>
</tr>
<tr>
<td>Woodworking</td>
<td>Solve problems</td>
<td>Designing and working with projects, models, and prototypes</td>
</tr>
<tr>
<td>Math and science classes</td>
<td>Understand and read maps</td>
<td>Working in a lab</td>
</tr>
<tr>
<td>Fitness and sports</td>
<td>Organize reports and people</td>
<td>Working on a team</td>
</tr>
<tr>
<td>Precision work</td>
<td>See a task through to completion</td>
<td>Operating tools and equipment</td>
</tr>
<tr>
<td>Design and architecture</td>
<td>Use a computer</td>
<td>Paying close attention to detail</td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How things work</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you answered “yes” to many of these questions, you might consider a future in one of the sample occupations listed below.

### High School/Short Term & Moderate OJT
- General Maintenance and Repair Workers
- Quality Control Worker
- Carpenters
- Construction Laborers
- Sheet Metal Workers
- Production Workers
- Packaging and Filling Operators
- Food Batchmakers

### Bachelor/Graduate Degree
- Plant Engineer
- Plant Manager
- Construction Manager
- Civil Engineer
- Electrical Engineer
- Mechanical Engineer
- Industrial Engineer
- Welding Engineer

### Long Term OJT/Certificate/Apprenticeship
- Electronics/Instrumentation Technician
- Maintenance Technician
- Welders
- Machinist
- HVAC Mechanics and Installers
- Plumbers, Pipefitters and Steamfitters
- Chemical Equipment Operators and Tenders
- CDL Truck and Tractor Operators
- Other Skilled Trade Workers (Roofers, Painters, etc.)

### Post-Secondary/Associate Degree
- Production, Planning and Expediting Clerks
- Jig and Fixture Design/Mold Maker
- Tool Maker
- Team Lead/Supervisor
- CNC Programmer/CNC Machinist
- Electrical and Electronics Repairers, Commercial and Industrial Equipment
- Welding Supervisors/Welding Inspectors
- Industrial Machinery Mechanics
- Tool and Die Makers

### Average Cost of Tuition in PA Educational Institutions (2017-2018 data)

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Tuition (In-State)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania Public Colleges/Universities</td>
<td>$11,547.30</td>
<td>Four-year, public institution. Partially funded by PA taxpayers, usually offer lower rates to in-state residents</td>
</tr>
<tr>
<td>Pennsylvania Private Colleges and Universities</td>
<td>$34,815</td>
<td>Four-year, not for profit private institutions</td>
</tr>
<tr>
<td>Pennsylvania Community Colleges</td>
<td>$7,257.43</td>
<td>Two-year, Associate Degree, Often has open admission policies, Only includes the 14 PA community colleges</td>
</tr>
<tr>
<td>OJT/Certificate and Registered Apprenticeships</td>
<td>Low cost or no cost</td>
<td>Classes or training that offer industry credentials or skills certifications and often are earn as you learn opportunities</td>
</tr>
</tbody>
</table>

Adapted from: CollegeCalc (https://www.collegecalc.org/colleges/pennsylvania/)