

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 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>

Erie County

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

Actual wages grow with additional education & training

Post-Secondary/ Associate Degree

Automotive Service Technicians & Mechanics

\$23,800

Electro-Mechanical Technicians***

\$53,768

High School / Short Term & Moderate OJT

Carpenter**

\$28,600

Maintenance & Repair

Workers

\$23,400

Welding, Cutters,

Solderers & Brazers

\$30,000

Operating Engineer &

Other Construction

Equipment Operators

\$30,000

Construction Laborers

\$23,600

CNC Operators,

Metal & Plastic

\$23,200

Long Term OJT / Certificate / Apprenticeship

HVAC & Refrigeration

Mechanics & Installers

\$34,900

Plumbers, Pipefitters &

Steamfitters

\$39,400

Machinist***

\$28,700

Heavy & Tractor Trailer

Truck Drivers

\$31,800

Electrician

\$39,200

Process Technician***

\$34,900

Bachelor / Graduate Degree

General & Operations Manager

\$60,400

Engineering

\$53,900

*Entry level wages as reported in 2019 **Could require longer term training ***Reported by local employers

For a list of Top 50 Erie County employers, visit: <http://bit.ly/Top50Emp>

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.

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

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	Long Term OJT/ Certificate/Apprenticeship	Post-Secondary/ Associate Degree
General Maintenance and Repair Workers Quality Control Worker Carpenters Construction Laborers Sheet Metal Workers Production Workers Packaging and Filling Operators Food Batchmakers	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.)	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
Bachelor/ Graduate Degree		
Plant Engineer Plant Manager Construction Manager Civil Engineer Electrical Engineer Mechanical Engineer Industrial Engineer Welding Engineer		

How much might it cost in the state of Pennsylvania? See the chart below to find out.

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

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

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