



About Engineering

Engineering involves applying scientific and mathematical principles to design, develop, and maintain systems, structures, devices, and processes to solve complex problems and improve the world around us. Engineers play a crucial role in various industries, and their work spans a wide range of applications, including technology, infrastructure, manufacturing, and research.

Engineers can find employment in various sectors, including aerospace, automotive, energy, construction, electronics, telecommunications, healthcare, and environmental protection, among others. The specific responsibilities and career paths of engineers can vary widely based on their specialization and industry.



Key Tasks

- Conduct research to gather data, analyze existing solutions, and stay informed about industry advancements.
- Create plans, designs, and specifications for solutions to problems.
- Manage materials, components, and resources needed for projects while considering factors like cost, availability, and sustainability.
- Create prototypes or conduct tests to validate their designs and ensure they meet the required specifications and standards.



Key Skills

- Creativity
- Innovation
- Attention to Detail
- Mathematical Skills
- Communication Skills
- Adaptability
- Project Management
- Risk Management
- Microsoft Excel
- Microsoft Office
- Ingenuity
- Analytical Skills



Education & Certifications

- Bachelor's degree in engineering or a related field.
- A degree from an ABET-accredited engineering program
- Professional Engineer (PE) license
- A passing score on the Fundamentals of Engineering (FE) exam
- A passing score on the Principles and Practice of Engineering (PE) exam



Industry Sector Employers

- SIMONA AMERICA
- The AZEK Company
- Lockheed Martin
- General Dynamics
- Mitsubishi Chemical Advanced Materials
- Tobyhanna Army Depot
- Noble Biomaterials
- Procter & Gamble



Local College/ University Programs

- Pennsylvania State University
- Lehigh University
- Lafayette College

**List above shows a sampling of sector employers and college/university programs which is not limited to the list above.*



Learn more about Engineering and other career pathways at [ScrantonChamber.com](https://www.scrantonchamber.com)

Sources:

<https://www.onetonline.org/>

