Engineering Technologists and Technicians

These workers perform technical work that supports engineering and scientific operations by operating, installing, testing, maintaining, and calibrating electrical, mechanical, and computer-based systems. This work often requires the application of electrical and engineering theory under the supervision of engineering staff. Target Occupations include:

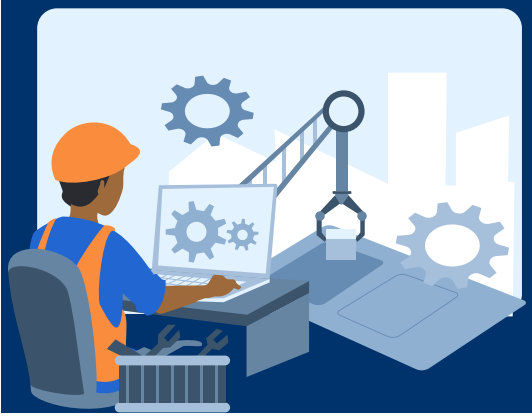
- Aerospace Engineering and Operations Technologists and Technicians
- Electrical and Electronic Engineering Technologists and Technicians
- Electro-Mechanical and Mechatronics Technologists and Technicians
- Industrial Engineering Technologists
- Mechanical Engineering Technologists

Is this job for you?

A person who thrives in this position typically fits the following description:

- Is thorough, with **strong attention to detail**
- Has **integrity** and is committed to making honest and ethical decisions
- Is **dependable**, reliable, and can fulfill obligations
- Is **flexible and adaptable**, open to both positive and negative change, and can roll with variety in the everyday workplace
- Can **analyze** information using logic to address challenges

Unsure but want to learn more? Click here.



Career Pathway

There are multiple entry points to becoming an Engineering Technologist or Technician. Many employers prefer an associate degree, hands-on experience, or a technical certificate for entry-level roles. As workers gain experience and technical expertise, they can advance into mid-level or supervisory positions. While a Bachelor's degree may be preferred for senior roles, substantial experience can serve as a substitute.

Less Education, More Experience

More Education, Less Experience

Technical Certificate and/or Apprenticeship

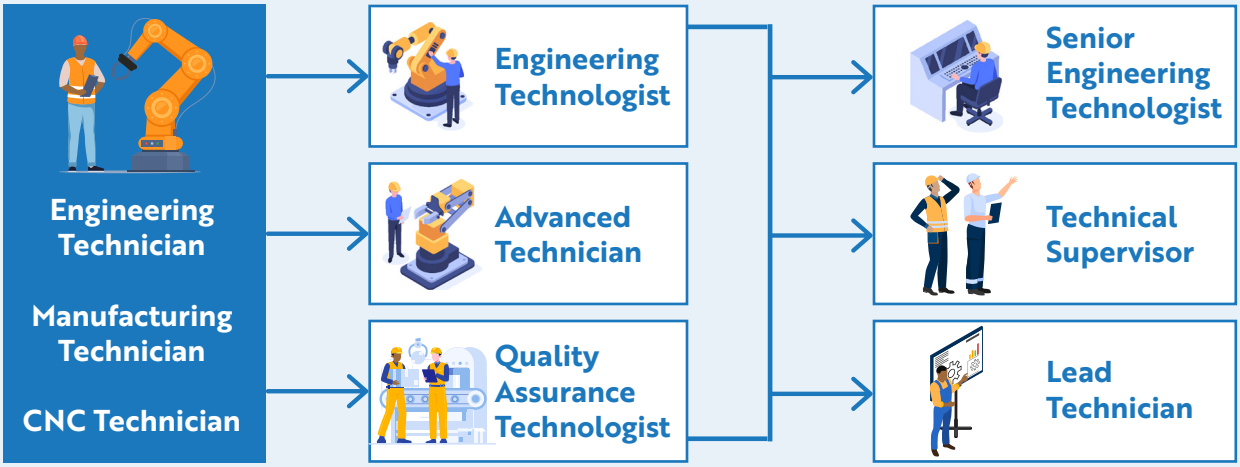
Associate's Degree

Bachelor's Degree

Engineering Technologists

There are several entry points to becoming an engineering technician or technologist. For example, hands-on experience, a technical certificate, or an associate's degree could be the entry point to becoming a technician, while longer work experience or more education can help advance to a technologist.

A technical diploma, associate degree, or apprenticeship offers a strong entry point into an engineering technologist or technician career. Many begin in entry-level roles supporting engineers, then advance into specialized areas like automation or process improvement through experience and certifications. With time, they can move into supervisory positions. Earning a bachelor's degree is not required, but it can accelerate advancement into senior roles. Similarly, while Maine doesn't require state licensure, certifications, such as from the National Institute for Certification in Engineering Technologies, can boost career prospects and validate technical skills.



Workers may be able to substitute experience for education, but occupational training improves advancement opportunities.

Entry-Level — Mid-Level — Senior-Level

Occupation Characteristics

What is a Machinist?

Sample Job Description: Perform technical work that supports engineering and scientific operations by operating, installing, testing, maintaining, and calibrating equipment.

Top Job Titles: Engineering Technician | Electrical Technician | Mechanical Technician | Quality Control Engineering Technician | Engineering Analyst

Work Activities:

- Working With Computers
- Making Decisions and Solving Problems
- Monitoring Processes, Materials, or Surroundings
- Documenting/Recording Information
- Communicating with Supervisors, Peers, or Subordinates

Source: O*NET

Skills

- Critical Thinking
- Reading Comprehension
- Active Listening
- Troubleshooting
- Operations Monitoring
- Repairing

Knowledge

- Engineering and Technology
- Mathematics
- Mechanical
- Technical Design
- Production and Processing
- Computers and Electronics

Work Environment

- Email
- Face-to-Face Discussions
- Wear Common PPE
- Typical Work Week >40 hours
- Being Exact or Accurate
- Environmentally Controlled
- Telephone Conversations

Related Occupations

The following occupations have comparable skills to engineering technology based on the levels and importance of knowledge, skills, and abilities. This means workers in these occupations could more easily transfer their competencies to work in the engineering.

- Life Science Technicians
- Industrial Engineering Technicians
- Architectural or Civil Drafters
- Electrical Technician
- Electrician

Sample Opportunities in Maine

→ Maintenance Technician | International Paper

→ Senior Test Technician | Enercon Technologies

→ Production Technician | Advanced Instruments Inc

→ Technology Engineer | Fiber Materials

This list is for illustrative purposes.

Occupation Summary

Engineering Technologists

Current Jobs in Maine in Manufacturing (2023)

600

Max. Projected Workforce Gap in Manufacturing (2023 -28)

~35

Median Hourly Wages across all sectors (2023)

$37.27

Typical Entry Points

Previous work-related skill, knowledge, or experience is required for these occupations. This includes training in vocational schools, related on-the-job experience, or an Associates' degree.

Experience in Related Occupations

- Maintenance Technician
- CAD Technician
- Quality Technician
- Machinist

Career and Tech Education

- Engineering Technology
- Drafting and Design Technology
- Manufacturing Technology

Associate's Degree or Advanced Training

- Engineering, General
- Electrical, Electronic, and Communications Engineering Technology

Career Progression

Career progression can take multiple forms depending on the worker's interests, prior experience, and skill attainment. Workers typically need experience, advanced certifications, or specialized engineering technology skills to advance.

Specialization

- Aerospace
- Electrical and Electronic Engineering
- Electro-Mechanical and Mechatronics
- Industrial Engineering
- Mechanical Engineering

Advancement

- Production Manager
- Engineer (with a Bachelor's degree)
- Senior Engineering Technologist
- Quality Manager

Cross Training

- CNC Programming
- Technical Sales
- Project Management
- CAD Technician
- Technical Report Writing

Training Opportunities

The programs listed here are for illustrative purposes. There are dozens of programs available for workers with any level of previous training or experience. Click here to learn more and find additional Maine-based training opportunities near you.

Maine-based institutions offer a range of training opportunities to learn more about Engineering Technology.

Career and Technical Education

Audience and Outcome | These programs are typically available to high school students and provide training in engineering fundamentals. Upon completion, students will be prepared for many entry-level technician roles.

- → **Engineering Technology** | Foster Regional Applied Technical Center (Franklin County)
- → **Drafting and Design Technology** | Lewiston Regional Technology Center (Androscoggin)
- → **Energy Systems Technology** | Tri-County Technical Center (Penobscot County)

Short-Term Training or Certificate Programs

Audience and Outcome | These programs equip adults with the practical skills needed for entry-level technician positions and can also help experienced technicians advance into higher-level or more specialized roles.

- → **Manufacturing Technician** | Southern Maine Community College (Cumberland County)
- → **Electrical Technology** | Kennebec Valley Community College (Kennebec County)

Associate's Degree Programs

Audience and Outcome | These programs are for adults and typically require up to a 2-year time commitment. Graduates are prepared to begin work in entry-level technician roles, with opportunities to advance as they gain experience and additional training.

- → **Electrical, Electronic, and Communications Engineering Technology** | Central Maine Community College (Androscoggin County)
- → **Electromechanical/Electromechanical Engineering Technology** | Washington County Community College (Washington County)

Apprenticeship Programs

Audience and Outcome | Apprenticeships are typically offered by Maine-based employers. They combine an academic curriculum with on-the-job training.

- → American Apprenticeship Round Table (Cumberland County)
- → Cianbro (Somerset County)

Relevant Industry Credentials

Audience and Outcome | These credentials help to advance into supervisory or specialized roles, with emphasis on technical proficiency and leadership in manufacturing environments.

- → Certified Engineering Technician
- → Lean Six Sigma
- → Smart Automation Certification Alliance Industry 4.0 Certifications