Machinists

These workers operate and set up various machine tools to manufacture high-precision components and instruments from metal. Responsibilities include fabricating, maintaining, modifying, and repairing mechanical instruments and parts. This role requires a strong understanding of mechanical systems, mathematics, material properties, technical layouts, and machining techniques. Sample job titles include:

- Computer Numeric Controlled Machinist
- Gear Machinist
- Maintenance Machinist
- Manual Lathe Machinist
- Production Machinist
- Tool Room Machinist

Is this job for you?

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

- Is thorough, with **strong attention to detail**
- Is **dependable**, reliable, and can fulfill obligations
- Is **independent** and able to work with little or no supervision
- Can **analyze** information using logic to address challenges
- Is **innovative** and able to develop new ideas or answers to challenges

Unsure but want to learn more? Click here.

Career Pathway

There are several paths to becoming a machinist. Most jobs require a high school diploma or certification, but additional training can improve job prospects and advancement. Experienced machinists with certifications can move into supervisory roles, overseeing others or monitoring quality control. Some may skip formal education for on-the-job learning, while others focus on certifications and training to advance.

Less Education, More Experience

More Education, Less Experience

High School and/or Certifications, such as CTE or Dual Enrollment

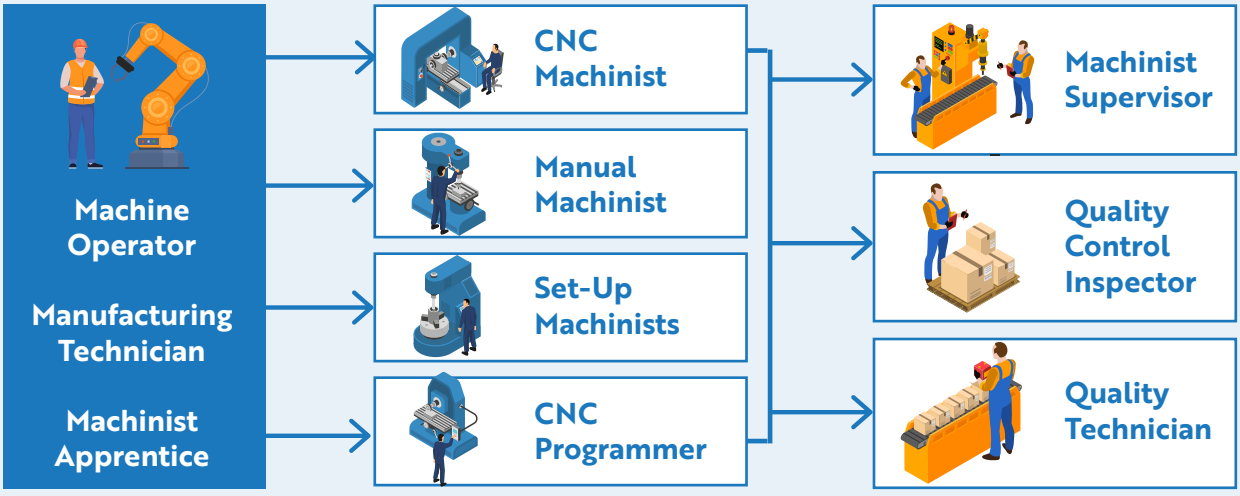
Apprenticeship

Associate's Degree

Machinists

There are several entry points to becoming a Machinist. Most often, previous work experience, including apprenticeships, is required to become a Machinist.

A certification or apprenticeship is a valuable entry point into a career as a machinist, as most roles prefer formal training or hands-on experience. Many machinists start as apprentices or in entry-level positions, learning to operate basic machines and read technical blueprints. They can advance into more technical or specialized roles as they gain experience and pursue additional certifications, such as CNC programming. Over time, machinists may move into supervisory or quality control positions. Those who pursue higher education will be well-positioned to transition into related fields, including manufacturing engineering or industrial automation.



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: Set up and operate machine tools to produce precision parts and instruments out of metal. May also fabricate and modify parts to make, repair, or maintain industrial machines.

Top Job Titles: Computer Numeric Controlled Machinist | Gear Machinist | Maintenance Machinist | Manual Lathe Machinist | Production Machinist | Tool Room Machinist

Work Activities:

- Controlling Machines and Processes
- Inspecting Equipment, Structures, or Materials
- Identifying Information and Detecting Changes
- Monitoring Processes, Materials, and Surroundings
- Repairing and Maintaining Mechanical Equipment

Source: O*NET

Skills

- Operation and Control
- Critical Thinking
- Operations Monitoring
- Active Listening
- Complex Problem Solving

Knowledge

- Mathematics
- Mechanical
- Production and Processing
- Technical Design

Work Environment

- Wear Common PPE
- Using Your Hands
- Being Exact or Accurate
- Face-to-Face Discussions
- Spend Time Standing
- Pace Determined by Speed of Equipment
- Environmentally Controlled

Related Occupations

The following occupations have comparable skills to Machinists 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 as Machinists.

- Computer Numerically Controlled Tool Operators
- Computer Numerically Controlled Tool Programmers
- Model Makers, Metal and Plastic
- Tool and Die Makers

Sample Opportunities in Maine

→ CNC Machinist | AEROTEK

→ Manufacturing Machinist | Procter & Gamble

→ Outside Machinist | General Dynamics – Bath Iron Works

This list is for illustrative purposes.

Occupation Summary

Machinists

Current Jobs in Maine in Manufacturing (2023)

1,380

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

~90

Median Hourly Wages across all sectors (2023)

$26.50

Typical Entry Points

A high school diploma is usually required for this occupation. Previous work experience can substitute advanced training, such as in vocational schools or an associate's degree.

Experience in Related Occupations

- Machine Setters, Operators, or Tenders
- Maintenance Technician
- Machine Assemblers
- Production Operator

Career and Tech Education

- Machining
- Machine Tool Technology
- Industrial Maintenance and Repair

Associate's Degree or Advanced Training

- Computer Numerically Controlled (CNC) Machinist Technology
- Machine Tool 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 machining skills to advance.

Specialization

- CNC Machining
- Aerospace Machining
- Medical Device Machining
- Toolmaking

Advancement

- Quality Technician
- Quality Control Inspector
- Specialty Machinist
- Manager

Training

- CNC Programming
- Blueprint Reading
- Metrology and Inspection Techniques
- Software Proficiency

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 working as a Machinist.

Career and Technical Education

Audience and Outcome | These programs are typically available to high school students and provide training in machining fundamentals. Upon completion, students will be prepared for many entry-level machinist roles, such as machine operator or machinist apprentice.

- → **Machine Tool Technology** | Biddeford Regional Center of Technology (York County)
- → **Machine Tool Technology** | Mid-Maine Technical Center (Knox County)
- → **Machine Tool 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 machinist positions and can also help experienced machinists advance into higher-level or more specialized roles.

- → **CNC Machining** | Central Maine Community College (Androscoggin County)
- → **Machining** | Mid-Coast School of Technology (Knox County)
- → **CNC Academy** | York County Community College (York 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 machinist roles, with opportunities to advance as they gain experience and additional training.

- → **Machining Technology** | Central Maine Community College (Androscoggin County)
- → **Machining Technology** | Southern Maine Community College (Cumberland County)
- → **Machining Technology** | York County Community College (York County)

Apprenticeship Programs

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

- → General Dynamics, Bath Iron Works (Sagadahoc County)
- → Pratt & Whitney (York County)

Relevant Industry Credentials

Audience and Outcome | These credentials help a machinist move into specialized or supervisory roles, validating precision, productivity, and leadership skills.

- → National Institute for Metal Working Skills (NIMS) Machining Certification (Level I or II)
- → NIMS CNC Operator Certification