

# Manual & CNC Machining



## What They Do

The primary role of a CNC Machinist is to create machine parts and tools using precision computer equipment. CNC (Computer Numerical Control) Machinists set up, adjust and maintain all equipment used in their daily job activities. They are also responsible for creating programming instructions for the parts they are manufacturing.

## Job Duties

- Machine parts to specifications, using machine tools such as lathes, milling machines, shapers, or grinders
- Set up, adjust, or operate basic or specialized machine tools used to perform precision machining operations
- Monitor the feed and speed of machines during the machining process
- Study sample parts, blueprints, drawings, or engineering information to determine methods or sequences of operations needed to fabricate products
- Program computers or electronic instruments, such as numerically controlled machine tools
- Confer with engineering, supervisory, or manufacturing personnel to exchange technical information
- Dismantle machines or equipment, using hand tools or power tools to examine parts for defects and replace defective parts where needed

## Job Earnings

**\*\*CareerZone.NY.gov**

\$31,730 per year salary average  
for entry-level workers  
\$54,590 per year salary average  
for experienced workers

## Education/Training

Most CNC machinist positions require training in vocational schools, related on-the-job experience, or an associate's degree in CNC Machining/Machine tool Technology. Employees in this occupation typically need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with this occupation.

## Job Outlook

In 2016, there were approximately 14,290 machinists employed in New York State. Based on the total number of annual openings and its growth rate in NYS, employment prospects for this occupation are described as favorable.

# Manual & CNC Machining - Career Pathway

Ways to Start Preparing for Your Future Career TODAY!

1

## Middle/High School Classes to Take:

- Computer Programming
- Drafting
- Industrial Arts
- Machining
- Metalwork
- Mathematics

2

## Clubs/Extracurricular Activities:

- Boy Scouts of America Explorer Program ([www.exploring.org](http://www.exploring.org))
- SkillsUSA ([www.SkillsUSA.org](http://www.SkillsUSA.org))
- GCC Tech Wars ([www.techwarsgccny.org](http://www.techwarsgccny.org))
- Camp Hard Hat for Grades 8-10 ([www.BEAGenesee.com](http://www.BEAGenesee.com))

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## Local BOCES/Career & Technical Education Programs:

- Genesee Valley BOCES ([www.GVBOCES.org](http://www.GVBOCES.org))
  - Metal Trades Program
- Monroe2-Orleans BOCES ([www.Monroe2BOCES.org](http://www.Monroe2BOCES.org))
  - Engineering & Metal Fabrication: Machining
- Orleans-Niagara BOCES ([www.ONBOCES.org](http://www.ONBOCES.org))
  - Advanced Manufacturing & Engineering
- Finger Lakes Youth Apprenticeship Program ([www.fingerlakesyouthapprenticeship.org](http://www.fingerlakesyouthapprenticeship.org))

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## Volunteer Opportunities:

- Habitat for Humanity

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## Local Colleges/Training:

- Colleges:
  - SUNY Alfred ([www.AlfredState.edu](http://www.AlfredState.edu))
  - Erie Community College ([www.ECC.edu](http://www.ECC.edu))
  - Finger Lakes Community College ([www.FLCC.edu](http://www.FLCC.edu))
  - Monroe Community College ([www.MonroeCC.edu](http://www.MonroeCC.edu))
- Training Programs:
  - Genesee Valley BOCES Adult Education ([www.GVBOCES.org/adulted](http://www.GVBOCES.org/adulted))
    - CNC Machining/Program
  - Monroe 2-Orleans BOCES Center for Workforce Development ([www.Monroe2CWD.edu](http://www.Monroe2CWD.edu))
    - Machining with CNC Fundamentals
  - Orleans-Niagara BOCES Adult & Workforce Education ([www.ONBOCES.org](http://www.ONBOCES.org))
    - Machine Tool