

## COMPUTER NUMERICALLY CONTROLLED (CNC) TOOL PROGRAMMERS

**ADVANCED MANUFACTURING INDUSTRY**  
OCCUPATION OUTLOOK IN SOUTHEAST MICHIGAN, 2023

### OCCUPATION SUMMARY

Develop programs to control the machining or processing of materials using automatic machine tools, equipment, or systems. This includes writing programs in the language of the machine's controller and storing them on various media. Additionally, they write instruction sheets and cutter lists to guide machine setup and encode numerical control tapes. Learn more at [onetonline.org](http://onetonline.org).

### AVERAGE WAGE IN MICHIGAN

	Entry	Median	Experienced
Hourly	\$19.91	\$28.22	\$37.79
Annually	\$41,413	\$58,698	\$78,603

### JOB TITLES

The Computer Numerically Controlled (CNC) Tool Programmers occupation refers to the entire industry in which someone works. Some examples of specific job titles for this occupation include:

- *CNC Programmers*
- *CNC Machinists and Programmers*
- *Application Engineers*
- *Fixture Designers*
- *Laser Applications Engineers*

### OCCUPATIONAL GROWTH

Projected to slight decrease by 2028 (10%); 281 annual job openings are predicted.

**10%  
GROWTH  
BY 2028**

**Debt-free training and additional support may be available to jobseekers  
and those currently employed in this career**

Contact your local **Michigan Works! Agency** to learn more  
[michiganworks.org/michigan-works-network](http://michiganworks.org/michigan-works-network)



## EARN WHILE YOU LEARN: REGISTERED APPRENTICESHIP

Employers or sponsors may provide apprenticeship opportunities, enabling individuals to acquire hands-on experience, engage in related instruction while receiving compensation. Completing a registered apprenticeship program can lead to career advancement and an average annual income of \$80,000. [Learn more.](#)

## GROW A CAREER WITH ADVANCED DEGREES AND CERTIFICATES

### PROFESSIONAL CERTIFICATIONS

- Hazardous Materials Manager Certification
- Forklift Certification
- Industrial Hygienist Certification (CIH)

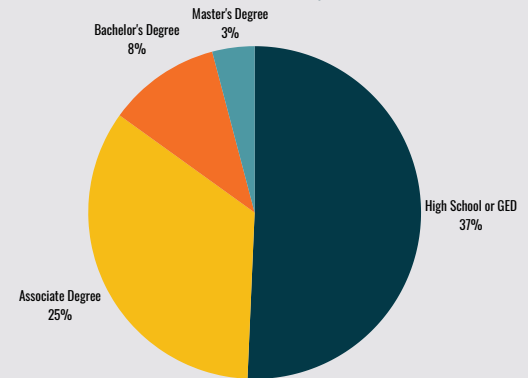
### ADVANCED DEGREES AVAILABLE

(Associate, Bachelor's and Master's Degrees)

- Quality Management
- Engineering
- Software Development
- Project Management

### EDUCATION

Percentage of Job Postings by Education Level



## A POTENTIAL PATH TO SUCCESS

Explore strategies for overcoming significant factors that can impact employment by clicking [here](#). The following illustration outlines a potential career trajectory based on labor market insights within this occupation.

### ENTRY LEVEL COMPETENCIES (0-2 YEARS EXPERIENCE)

Current employees who obtain training may be offered a new position, additional responsibility, and/or additional benefits.

#### Skills/knowledge in:

- Machining
- Computer-Aided Manufacturing
- Lathes

#### Qualifications:

- Valid Driver's License

#### Skills/knowledge in:

- Mills
- Tooling
- Cutting Tool (Machining)
- Machinery
- Blueprint Reading
- Computer-Aided Design
- SolidWorks (CAD)

#### Skills/knowledge in:

- Computer Numerical Control (CNC)
- Blueprinting
- 3D Modeling
- Machine Setup
- Manufacturing Processes

#### Qualifications:

- Forklift Certification

### MID-LEVEL COMPETENCIES (3-6 YEARS EXPERIENCE)

Continue gaining skills to stay relevant in an ever-changing ecosystem.

#### Skills/knowledge in:

- CNC Machining
- Machine Operation
- Process Improvement
- Technical Drawing
- Microsoft Suite
- Matercam (CAD/CAM Software)
- AutoCAD

#### Skills/knowledge in:

- Project Management
- Forklift Truck
- Asset Management
- Artificial Cardiac Pacemakers
- General Mathematics
- Geometry
- CAD Data Exchange

#### Skills/knowledge in:

- Automation
- Welding
- Calipers
- Vericut
- Teamcenter (PLM Software)
- Spreadsheets
- G-Codes
- Programming Tools

#### Qualifications:

- Certified Hazardous Materials Manager

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