



Computer-Controlled Machine Tool Operators, Metal and Plastic

SOC Code 51-4011 • Projected Growth (2020) 0 %

Description

What Computer-Controlled Machine Tool Operators, Metal and Plastic, Do

Operate computer-controlled machines or robots to perform one or more machine functions on metal or plastic work pieces.

Duties

- **Controlling Machines and Processes** - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- **Inspecting Equipment, Structures, or Material** - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- **Getting Information** - Observing, receiving, and otherwise obtaining information from all relevant sources.
- **Identifying Objects, Actions, and Events** - Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
- **Making Decisions and Solving Problems** - Analyzing information and evaluating results to choose the best solution and solve problems.

Training Opportunities Linked to Those Jobs

[\(Degree Types and Colleges/Universities\)](#)

How to Become a Computer-Controlled Machine Tool Operator, Metal and Plastic

Education and Training

These occupations usually require a high school diploma or a technical certificate.

Job Training

Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Important Qualities

Monitoring - Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Operation Monitoring - Watching gauges, dials, or other indicators to make sure a machine is working properly.

Critical Thinking - Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Quality Control Analysis - Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

Operation and Control - Controlling operations of equipment or systems.

Postsecondary Education

Texas Southmost College	South Texas College	Texas State Technical College	The University of Texas at Brownsville	The University of Texas at Pan Am
	Precision Manufacturing Technology (CERT)	Precision Manufacturing Technology Machinist (CERT)		
		Precision Manufacturing Technology – Mold,		

		Tool & Die Making (AAS)		
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Local Employers

Acetylene Oxygen CO	Brownsville		Boeing CO	Harlingen
Amfels Inc	Brownsville		Lockheed Martin Corp	Harlingen
Brownsville Sheet Metal Works	Brownsville		SMI Valley Steel	Harlingen
Stainless Pipe Products Inc	Brownsville		Tri-Pak Machinery Inc	Harlingen

Career Options

(Specific Job Types)

- Computer Numerical Control Operator
- Computer Numerical Control Machine Operator
- Production Worker
- Computer Numerical Control Set-Up Operator
- Computer Numerical Control Machinist
- Computer Numerical Control Mill Operator
- Brake Press Operator
- Machine Operator
- Computer Numerical Control Lathe Operator
- Computer Numerical Control Set Up Technician

Salary Ranges

Wages for Computer-Controlled Machine Tool Operators, Metal and Plastic

Location	Pay Period	2012				
		10%	25%	Median	75%	90%
United States	Hourly	\$11.22	\$13.63	\$17.10	\$21.11	\$25.41
	Yearly	\$23,300	\$28,400	\$35,600	\$43,900	\$52,900
Texas	Hourly	\$10.65	\$13.00	\$16.87	\$21.89	\$27.49
	Yearly	\$22,200	\$27,000	\$35,100	\$45,500	\$57,200

Sources

The information provided in this document was collected from the following sources:

Occupational Outlook Handbook (<http://www.bls.gov/ooh/>)

O*NET OnLine (<http://www.onetonline.org/>)

Texas CARES (<http://www.texascaresonline.com/>)

CareerOneStop (<http://www.careeronestop.org/>)



Course Overview: Planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities.

Computer-Controlled Machine Tool Operators, Metal and Plastic

Career Goal (O*NET Code): (51-4011) - Operate computer-controlled machines or robots to perform one or more machine functions on metal or plastic work pieces.

Student Name: _____

Grade: _____

School: _____

SUGGESTED COURSEWORK

EXTENDED LEARNING EXPERIENCES

Middle School	8th	HS Courses:	(Local districts may list high school credit courses here)	<p>Curricular Experiences: BEST Robotics, Inc FIRST High School Robotics Competition SkillsUSA Technology Student Association TSTC Summer Technology Camps UTB Summer Robotics Camp</p> <p>Career Learning Experiences: Apprenticeship Career Preparation Internship Job Shadowing</p>	<p>Extracurricular Experiences: National Engineering Design Competition School Newspaper Student Government UIL Academic Competitions Yearbook</p> <p>Service Learning Experiences: Campus Service Organizations Community Service Volunteer Habitat for Humanity Peer Mentoring / Peer Tutoring</p>	
High School	9th	Core Courses:	English I Algebra I or Geometry Biology			World Geography Languages other than English I Physical Education
		Career-Related Electives:	Principles of Manufacturing			
	10th	Core Courses:	English II Geometry or Algebra II Chemistry			World History Languages other than English II
		Career-Related Electives:	Precision Metal Manufacturing or Welding			
	11th	Core Courses:	English III Algebra II or Pre-Calculus Physics/Principles of Technology I			United States History Professional Communications Languages other than English III
		Career-Related Electives:	Advanced Precision Metal Manufacturing or Advanced Welding			
12th	Core Courses:	English IV Precalculus/Engineering Mathematics/Calculus Engineering Design and Problem Solving	Government/Economics Fine Arts	<p>COLLEGE CREDIT OPPORTUNITIES -- High School</p> <p>Students should take Advanced Placement (AP), International Baccalaureate (IB), dual credit, Advanced Technical Credit (ATC), or locally articulated credit courses, if possible. List those courses that count for college credit on your campus.</p>		
	Career-Related Electives:	Practicum in Manufacturing or Problems and Solutions or Career Preparation I				

How to Become a Computer-Controlled Machine Tool Operators, Metal and Plastic
 The education level and qualifications needed to enter these jobs vary depending on the industry and employer. Although a high school diploma is enough for most jobs, experience and extra training is needed for more advanced work.

Career Options:

Professional Associations:

Postsecondary	Texas Southmost College South Texas College Texas State Technical College		
		Precision Manufacturing Technology (CERT)	Precision Manufacturing Technology Machinist (CERT)
		Precision Manufacturing Technology - Mold, Tool & Die Making (AAS)	
		University of Texas at Brownsville	University of Texas - Pan American

- Computer Numerical Control Operator
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- Computer Numerical Control Machine Operator
- Computer Numerical Control Set Up Operator
- Computer Numerical Control Mill Operator
- Machine Operator

Students may select other elective courses for personal enrichment purposes.

This plan of study serves as a guide, along with other career planning materials, for pursuing a career path and is based on the most recent information as of 2012. All plans meet high school graduation requirements as well as college entrance requirements.