



# M-Powered Level II Career Profile CNC Lathe Technician

<b>Job Description:</b>	<p>CNC Technicians are machinists with additional skills in programming, setup and operating computer driven machine tools. Most high-tech products including computers, aircraft and medical devices use precision components made on CNC machine tools. After determining the best manufacturing strategies and selecting tools, a CNC program is developed. CAD/CAM (Computer Aided Design/Computer Aided Manufacturing) software is commonly used to assist in developing the CNC program.</p> <p>CNC Machine Types: Mill and Lathe. Lathe is a rotary process in which the tooling is stationary and the work moves. Milling machine is a linear process where the tool moves and the work stays stationary. Skill sets are transferable between mill and lathe machines.</p>
<b>Skills/Knowledge Needed:</b>	<p>The CNC Technician relies on a strong background of machining skills, including:</p> <ul style="list-style-type: none"> <li>• Understanding of machines, tooling, blueprints, and additional methods used to produce and inspect a part.</li> <li>• Monitoring performance and equipment</li> <li>• Controlling quality</li> </ul> <p>Additional skills/knowledge required:</p> <ul style="list-style-type: none"> <li>• Good communication</li> <li>• Reason and problem solving</li> <li>• Mechanical: Knowledge of designing, using, and repairing machines and tools.</li> <li>• Mathematics: Knowledge of the rules and uses of numbers. Areas of knowledge include arithmetic, algebra, geometry, and statistics.</li> <li>• Production and processing: Knowledge of how products are made and supplied.</li> <li>• Computers and electronics: Knowledge of computer hardware and software.</li> </ul>
<b>Interest in:</b>	<ul style="list-style-type: none"> <li>• Consider support from their employer important. They like to be treated fairly and have supervisors who will back them up. They prefer jobs where they are well trained.</li> <li>• Have realistic interests. They like work activities that include practical, hands-on problems and solutions. They like to work with plants, animals, and physical materials such as wood, tools, and machinery. They often prefer to work outside.</li> <li>• Have conventional interests. They like work activities that follow set procedures, routines, and standards. They like to work with data and</li> </ul>

*M-Powered Program, a joint effort between Hennepin Technical College & HIREd, is funded by the US Department of Labor Hennepin Technical College, an affirmative action, equal opportunity employer and educator.*

*M-Powered has Veteran preference of admission.*

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	detail. They prefer working where there is a clear line of authority to follow.
<b>Education/Experience:</b>	High school diploma, CNC certificate, or A.S./equivalent and 0-2 years experience in manufacturing environment
<b>Alternate Titles:</b>	CNC Lathe Operator, CNC Machine Operator, CNC Machinist, CNC Inspector

## Knowledge and Skills Obtained at Level II

Course	Description
Turning Technology I MACH1110 3 credits	This course is designed to introduce the student to the function and application of the engine lathe. Basic turning operations will be performed. Threading with taps and dies, boring and grooving operations will also be covered. Students will produce parts in the shop environment. This course will cover the characteristics of hazardous wastes and its safe handling, storage, and disposal.
Introduction to CNC MACH1140 3 Credits	This course will introduce the students to the fundamentals of computer numerical control (CNC) milling and turning. Basic CNC operation and conversational programming will be covered. This course will cover the characteristics of hazardous wastes and its safe handling, storage, and disposal.
CNC Set-up & Operations MACH2400 3 Credits	This course will familiarize students with CNC machines. The student will be trained in safety procedures, setup, and operation of various types of CNC machines. This course will cover the characteristics of hazardous wastes and its safe handling, storage, and disposal.
<b>HTC Credits Earned:</b> 9	
<b>Credentials Taken:</b> <b>National Institute of Metalworking Skills:</b> Measurement, Materials & Safety CNC Turning: Programming Set-up & Operation	

## Career Pathway

Career Progression	Wage	Continued Education
Manual Operator	\$18,720-\$20,800+	HS Diploma
Machine Operator	\$24,960-\$29,120+	Certificate, Diploma, 1 Specialty
CNC Technician	\$33,280-\$37,440+	AAS Degree, 1 Specialty
Tool and Die Maker Technician	\$33,280-\$37,440+	AAS Degree, 1 Specialty
Quality Technician	\$33,280-\$37,440+	AAS Degree, 1 Specialty
Technician Manager	\$41,600-\$49,920+	AAS Degree, Multiple Specialties
CNC Swiss Operator	\$56,160-\$72,800+	AAS Degree, Advanced Certificate, several years of work experience
Specialized Engineer	\$45,760-\$58,240+	BA/BS Degree

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