

# COMPUTERIZED NUMERICAL CONTROL - (QUICKSKILLS) CERTIFICATE - CNC7

This certificate teaches the core principles and practices of employment as an entry-level CNC operator, while addressing the needs of a seasoned machinist.

Students in this program will be introduced to modern practices which include Precision Measurement techniques and the foundational principles of CNC Operations/Set-up. Students will learn and perfect introductory skills in the program and daily maintenance of CNC machines. Various types of automated equipment Coordinate Measuring Machines are utilized so that students gain practical experience that will help them obtain gainful employment in industry.

## Requirements

Courses	Course Title	Credit Hours
<b>Required Course Information</b>		
MTT 105	Machine Tool Math Applications	3
MTT 120	Machine Tool Print Reading	3
MTT 121	Machine Tool Theory I	3
MTT 130	Fundamentals of Geometric Dimensions and Tolerances	2
MTT 143	Precision Measurements	2
MTT 251	CNC Operations	3
MTT 253	CNC Programming and Operations	3
Subtotal		19
<b>Total Hours</b>		<b>19</b>

## Graduation Plan

### Fall Start

Course	Title	Hours
<b>First Year</b>		
<b>Fall Semester</b>		
MTT 120	Machine Tool Print Reading	3
MTT 121	Machine Tool Theory I	3
MTT 143	Precision Measurements	2
MTT 251	CNC Operations	3
<b>Hours</b>		<b>11</b>
<b>Spring Semester</b>		
MTT 105	Machine Tool Math Applications	3
MTT 130	Fundamentals of Geometric Dimensions and Tolerances	2
MTT 253	CNC Programming and Operations	3
<b>Hours</b>		<b>8</b>
<b>Total Hours</b>		<b>19</b>

### Spring Start

Course	Title	Hours
<b>First Year</b>		
<b>Spring Semester</b>		
MTT 105	Machine Tool Math Applications	3
MTT 130	Fundamentals of Geometric Dimensions and Tolerances	2
MTT 253	CNC Programming and Operations	3
<b>Hours</b>		<b>8</b>
<b>Fall Semester</b>		
MTT 120	Machine Tool Print Reading	3
MTT 121	Machine Tool Theory I	3
MTT 143	Precision Measurements	2
MTT 251	CNC Operations	3
<b>Hours</b>		<b>11</b>
<b>Total Hours</b>		<b>19</b>

## Application and Advising

If you are ready to start your education, there are a few simple steps involved in enrolling at Piedmont Technical College.

Get Started Today (<https://www.ptc.edu/admissions/new-students/>)

## Advising Information

The following information provides a guide for advisors who are helping students enroll in this program.

## Program Notes

This certificate is designed for someone with an MTT degree or diploma, or 4+ years MTT work experience.

MTT courses are offered during days and evenings.

## Program Student Learning Outcomes

### Purpose Statement

The Computerized Numerical Control Certificate is designed for students with a machinist background who desire the knowledge of basic operations of CNC machinery. Students will learn basic CNC programming. Graduates will have good working knowledge of CNC and the jobs associated with this type of work.

### Program Student Learning Outcomes

1. Apply theoretical knowledge gained in class to complete metal working projects to blueprint requirements.
2. Setup and safely operate all machine tools required for project completion.
3. Maintain the personal discipline to complete projects on time.
4. Use technology in machine shop related to on the job requirements.
5. Use applicable tooling correctly during various machining operations.