

# MACHINE TOOL TECHNOLOGY: CERTIFICATE OF ACHIEVEMENT

---

This program prepares students for employment in the machinist and/or toolmaking trade. The courses cover setting up and operating basic machine tools such as lathes, milling machines, drill presses, grinders. Computerized machine tool programming and operation is also included. Emphasis is placed on the manufacture of component machine parts, using the materials removal process for metals and plastics. The course of study also includes precision measuring skills, blueprint reading, cutting tool design, shop mathematics, and efficient and economical sequencing of machine tooling operations.

## Program Learning Outcomes

1. Demonstrate good work and safety habits while using hand tools and power equipment.
2. Perform basic machining operations on lathes, mills, surface grinders and drill presses.
3. Perform basic measuring functions, calculating all required math, using precision measuring tools.
4. Read engineering drawings to accomplish required operations on machine tools.
5. Set-up, operate, program basic CNC lathes and mills and accomplish advanced lathe and mill processes, while working independently.

## Certificate Requirements

Code	Title	Units
<b>Required Courses</b>		
MACH-110	Machine Technology 1	7
MACH-111	Machine Technology 2	7
MACH-210	Machine Technology 3	7
MACH-211	Machine Technology 4	7
DDGT-110	Technical Drawing Fundamentals	3
PHYS-110	Descriptive Physics	3
PHYS-111	Descriptive Physics Laboratory	1
TECH-92	Technical Mathematics 1	3
TECH-107	Technical Mathematics II	3
WELD-100	Welding Theory & Practice 1	3
<b>Total Units</b>		<b>44</b>