

MACHINE TOOL TECHNOLOGY: NUMERICAL CONTROL MACHINE OPERATOR OPTION (CERT)

CERTIFICATE OF ACHIEVEMENT

The Numerical Machine Operator Certificate of Achievement program provides students with basic and advanced training in operations of manual machines, Computerized Numerical Control (CNC) machines, Computer Assisted Manufacturing (CAM), and quality control to form and develop the fundamental skills and necessary for the average and expected working knowledge in preparation for employment with potential for future advancement in the manufacturing and automation environment. Enrolled students are strongly positioned for employment in the machining industry throughout the course of the Program. Employment opportunities are available in manufacturing companies where automation systems are utilized. Typical job titles can include but not limited to Machine Operators, Machinist, Manufacturing Technicians, Operations Technicians.

Program Student Learning Outcomes

- Apply industry standard safety practices and specific safety requirements for different machining operations.
- Interpret blueprint information and translate it into actionable items.
- Calculate necessary tolerances to plan for machine sequences.
- Perform the setup and operation of band saw, lathe, mill, and drill press.
- Perform basic setup and operation of CNC lathe & mill.
- Inspect the produced part to ensure completion per blueprint requirement.
- Complete an industry standard inspection report.

Program Requirements

| Code Number | Course Title | Units |
|-------------------------|---|-------------|
| Required Courses | | |
| MTT 100 | Machine Tool Introduction | 2.0 |
| MTT 130 | Quality Practices and Measurement | 2.0 |
| MTT 131 | Geometric Tolerance Inspection using Verisurf | 3.0 |
| MTT 140 | Industrial and Machine Tool Safety | 1.0 |
| MTT 151 | Mastercam Introduction | 3.5 |
| MTT 152 | Setup and Operation of CNC Milling Machines | 2.5 |
| MTT 157 | Setup and Operation of CNC Lathes | 2.5 |
| MTT 191L | CNC Mill Machining Laboratory | 1.0 |
| MTT 195L | CNC Lathe Machining Laboratory | 1.0 |
| Total Units | | 18.5 |