

# **CNC Lathe**

## **Course Outcome Summary**

Updated November 2022

### **Course Information**

**Total Credits**                      3

### **Description**

Students will gain practical experience in setting up and performing basic operations on CNC Lathe machines.

### **Prerequisites**

OSHA 10 or 30 Safety Course  
CNC Operations

### **Exit Learning Outcomes**

#### **Program Outcomes**

- A. The student will be able to program, set up, and operate the CNC Turning Center.
- B. Manufacture parts from various materials in accordance with specifications from blueprints, electronic drawings, and shop sketches
- C. Solve quality problems using process planning, technical knowledge, teamwork, mathematics, and critical thinking
- D. Apply safety principles in a work environment to minimize hazards and prevent losses to productivity
- E. Demonstrate employability skills needed to obtain and retain employment in machine tool and related fields
- F. Use CAD and CAM programs to design parts and program manufacturing machines

### **Competencies**

- 1. Students will graphically preview tool paths.
- 2. Students will demonstrate safe use of equipment.
- 3. Students will demonstrate proper setup and use of tools and fixtures.
- 4. Students will operate a CNC lathe to process parts within specifications.
- 5. Students will manually perform operations to make linear, angular, and circular moves.
- 6. Students will perform and document first part inspection.
- 7. Students will identify when and how to change cutting tools.
- 8. Students will demonstrate proper lab maintenance including cleaning