

# MFG 217 - CNC OPERATIONS - LATHE

---

## Course Description

This course will introduce students to CNC (Computer Numerical Control) turning machines or CNC lathes. CNC lathe procedures will include set up from a list of guidelines to properly and safely make a part to blueprint specifications. Students will spend lab time going over machine demonstrations with individual practice and support, supplemented with classroom and online learning going over safety procedures and machine set up operations. Group 2 course.

## Credit Hours

4

## Contact Hours

6

## Lecture Hours

2

## Lab Hours

4

## Required Prerequisites

MFG 113

## Recommended Prerequisites or Skills Competencies

MTH 100 or higher

## General Education Outcomes supported by this course

Quantitative Reasoning

## Course Learning Outcomes

### Knowledge:

- Identify the capabilities of various CNC Lathe machine tools.
- Demonstrate effective metal cutting principles.

### Application:

- Apply kinetic cutting principles to all machining operations.

### Integration:

- Perform operations on CNC machines to meet specifications on a given print.

### Human Dimension:

- Collaborate with others to work effectively in the shop environment.

### Caring - Civic Learning:

- Demonstrate caring through proper use of tools.

### Learning How to Learn:

- Transfer the concept of order of operations of a system to new situations.