

COURSE PREFIX/NO:       **MTT 258**  
COURSE TITLE:           **Machine Tool CAM**  
LEC HRS/WK:           **2.0**  
LAB HRS/WK:           **3.0**  
CREDIT HRS/SEMESTER:   **3.0**

[Distance Learning Attendance/VA Statement](#)  
[Textbook Information](#)

## **COURSE DESCRIPTION**

This course is a study of computer-assisted manufacturing graphics systems needed to create CNC programs.

## **COURSE COMPETENCIES**

### **Module 1 – Intro to CAD-CAM software**

- Discuss CAD-CAM software
- Demonstrate the use of software features

### **Module 2 – Create/Import Geometry**

- Demonstrate and make simple geometry
- Demonstrate and make complex geometry
- Demonstrate importing files

### **Module 3 – Sequence of Operations**

- Determine tooling requirements and tool positions for simple geometry
- Create tool paths
- Post process to create the programming code for the appropriate machine
- Determine tooling requirements and tool positions for complex geometry
- Create tool paths
- Post process to create programming code for the appropriate machine

### **Module 4 – Manufacture the Geometry**

- Discuss machine safety
- Discuss the parts and accessories of the machine
- Discuss loading program in the machine
- Discuss setting the tool and fixture offsets
- Demonstrate “dry run” and/or graph the program and correct any errors
- Demonstrate the first run (machining) of the part

## **MINIMAL STANDARDS/PERFORMANCE OBJECTIVES**

Assignments and attendance must be completed as designated in “Evaluation Strategies/Grading.” Criteria for minimal acceptable performance will be provided by the instructor.

### **REQUIREMENTS:**

#### Attendance Policy

The college attendance policy stated in the college handbook will be honored.

#### Academic Honesty

Students are expected to adhere to the college policy regarding student conduct as stated in the college handbook.

#### Assignments

Students are expected to complete all assignments and any supplementary exercises designated by the instructor.

#### Projects

Students are expected to complete all labs and any supplemental exercises designated by the instructor.

## **EVALUATION STRATEGIES/GRADING**

Students will be expected to complete written tests and projects as specified by the instructor. Minimum average score of 70% will be required on tests, projects, and homework.

The final grade for MTT 258 will be determined as follows:

Module 1	10% of final grade
Module 2	10% of final grade
Module 3	10% of final grade
Module 4	10% of final grade
Lab projects	40% of final grade
Work Attitude	10% of final grade
Cleanup	10% of final grade

Work Attitude is defined as:

- Participation
- Responsibility
- Cooperation
- Professionalism
- Appearance
- Attendance

Grading scale will be:

A = 90-100

B = 80-89

C = 70-79

D = 60-69

F = 0-59

### **CRITERIA FOR LAB PROJECTS**

A = Student completes all projects correctly without assistance.

B = Student completes all projects correctly with minimal assistance from instructor.

C = Student completes all projects with constant assistance from instructor.

D = Student does not complete all projects with or without assistance.

F = Student does not attempt to complete projects with or without assistance.

### **EVALUATION CRITERIA FOR LAB PROJECTS**

Projects must be machined within specified tolerance.

Projects must be neat in appearance.

Projects must be free of burrs.

### **ENTRY LEVEL SKILLS**

The student should be able to read, write, and do simple arithmetic.

### **PREREQUISITES/CO-REQUISITES**

None

**Disabilities Statement:** Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Offices (SR) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.