

## COURSE INFORMATION

COURSE PREFIX/NO:     **MTT 121**  
COURSE TITLE:         **Machine Tool Theory I**  
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 covers the principles involved in the production of precision metal parts.

## COURSE COMPETENCIES

### Module 1 – Intro to Machine Tool

- History of Machines
- Careers in metalworking

### Module 2 – Measurement

- Demonstrate the use of basic measuring tools
- Demonstrate the use of precision measuring instruments

### Module 3 – Hand tools and bench work

- Demonstrate the use of holding, striking, and assembly tools, such as hammers, screw drivers, bench vise, wrenches, and pliers
- Demonstrate the use of hand type cutting tools, such as files, and hacksaws
- Demonstrate the use of taps and dies

### Module 4 – Engine Lathe

- Discuss lathe safety
- Discuss the parts and accessories of a lathe
- Discuss cutting speed, feed, and depth of cut
- Demonstrate cutting tool grinding
- Demonstrate turning of a part held by the lathe chuck
- Demonstrate turning of a part between centers
- Demonstrate drilling, boring, reaming, and tapping

## 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 60% will be required on tests, projects, and homework.

The final grade for MTT 121 will be determined as follows:

Module 1	15% of final grade
Module 2	15% of final grade
Module 3	15% of final grade
Module 4	15% of final grade
Lab projects	20% 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:**

### **Prerequisites:**

RDG 031 or equivalent

### **Co-Requisites:**

None