

## COURSE INFORMATION

COURSE PREFIX/NO: **MTT 124**

COURSE TITLE: **Machine Tool Practice II**

LEC HRS/WK: 2.0

LAB HRS/WK: 6.0

CREDIT HRS/SEMESTER: 4.0

[DL ATTENDANCE/VA STATEMENT](#)  
[TEXTBOOK INFORMATION](#)

## COURSE DESCRIPTION

This course covers the practical application of the principles in Machine Tool Theory II. These principles are included in the machining parts using machine tools, including lathes, mills, drill presses, jig bores, and the attachments for each.

## COURSE COMPETENCIES

Upon successful completion of this course, the student will perform the following:

Milling Machine:

- select and mount proper cutting tool
- select correct speeds and feeds
- indicate vise
- set up angle plate

Lathes:

- Facing
- Boring
- Threading
- Tapering

Drill Press:

- Drilling
- Reaming
- Counterboring
- Countersinking

Jig Bores:

- Drilling
- Reaming
- Boring

## MINIMAL STANDARDS/PERFORMANCE OBJECTIVES:

### MILLING MACHINES:

Following classroom lecture and instructors demonstrations the student will:

- A. Select and mount proper cutting tool in accordance with the guidelines.
- B. Select the correct speeds and feeds using a feed and speed chart with 100% accuracy.
- C. Indicate a vise in accordance with the instructors guidelines.
- D. Set up an angle plate in accordance with the instructors guidelines.

## LATHES:

Following classroom lecture and instructors demonstrations the student will:

- A. Face part to instructor's satisfaction.
- B. Bore part according to blueprint specifications.
- C. Taper part according to blueprint specifications.

## DRILL PRESS:

Following classroom lecture and instructors demonstrations the student will:

- A. Drill, ream, counterbore, and countersink holes according to blueprint specifications.

## JIG BORES:

Following classroom lecture and instructors demonstrations the student will:

- A. Drill, ream, and bore according to blueprint specifications.

## COURSE REQUIREMENTS

### ATTENDANCE

The student should adhere to the attendance policy set forth in the York Technical College Student Handbook. "Students must attend 80% of the hours assigned the class for a semester to receive credit for the course."

In case a student does miss a class he/she is responsible for obtaining the material that was covered during the absence.

If a student is aware that he/she will miss class, then the student should notify the instructor at the earliest possible date.

If a student misses a test because of illness or urgent emergency, then he/she should do the following:

Notify the instructor prior to the class period, or at the earliest possible date. At that time a new date for a make-up test will be scheduled.

Student with unexcused absences during test time will be allowed to take a make-up test at the instructor's discretion.

The student has the burden of making sure that some arrangement was made with the instructor to take a make-up test.

### ACADEMIC HONESTY

"York Technical College adheres to the South Carolina TECH Student Code, approved by the State Board for Technical and Comprehensive Education on March 13, 1974 (revised April 25, 1984). Copies of this code are available in the Library and from Student Services. Any student caught cheating or involved in any other academic dishonesty will be given a grade of zero and will be subject to further disciplinary action."

### PARTICIPATION IN CLASS DISCUSSION

## COMPLETING ASSIGNED READING, LAB DEMONSTRATIONS, AND TESTS CLASSROOM AND SHOP PROCEDURES

- Roll will be called at the beginning of each class.
- Students are responsible for assigned reading on:  
Grinding Machines: Surface and Cylindrical Milling Machines: Types, construction, accessories and attachments.
- Tools and equipment that are used will be returned to their proper place.
- At the end of each class the student will be responsible for cleaning his/her work area. Brushes, brooms, and mops will be provided for this purpose.
- Shoes and safety glasses must be provided by the student.

## LAB REQUIREMENTS

During the lab, students may work in pairs or individually. The instructor must see the completed project. A performance test will be given to ascertain if the student can successfully make the project.

## EVALUATION STRATEGIES/GRADING

Students will be expected to complete 3 written test, 14 projects, and homework. Minimum score of 60% will be required on each test, project, and homework. Students who score below 70% may request a re-test at the instructor's discretion. Maximum re-test score will be 80%.

The final grade for MTT 124 will be determined as follows:

Shop Projects	70%
Test	20%
Homework/QA	10%

Grading scale is as follows:

A	90-100
B	80-89
C	70-79
D	60-69
F	0-60

## 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.

## REQUIREMENTS FOR SHOP PROJECTS

1. Projects must be machined within specified tolerance.
2. Projects must be neat in appearance.
3. Projects must be free of burrs.

## ENTRY LEVEL REQUIREMENTS:

The student should be able to use measuring and bench tools and be able to operate a lathe and drill press.

PREREQUISITES: MTT 122 or vocational training approved by department manager

CO-REQUISITES : None

#### TOPIC/CONTENT OUTLINE

- A. Milling Machine
- B. Lathes
- C. Drill Press
- D. Jig Bores

#### METHODS OF INSTRUCTION

Classroom instruction will include lectures and discussions.

Alternate instructions: If extra help is desired by the student, he/she should:

1. Ask the instructor for additional help in the shop.
2. Review units in the textbook.