

COURSE INFORMATION

COURSE PREFIX/NO: **MTT 216**

COURSE TITLE: **Tool Room Machining II**

LEC HRS/WK: 3.0

LAB HRS/WK: 3.0

CREDIT HRS/SEMESTER: 4.0 [DL ATTENDANCE/VA STATEMENT](#) [TEXTBOOK INFORMATION](#)

COURSE DESCRIPTION

This course covers advanced machine tool operations, including complex die operations.

COURSE COMPETENCIES

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

- set up cylindrical grinder for various grinding
- set up shaper for flat machining
- set up drill press for drilling and reaming various holes
- know the essential Die-to-Press relationships
- know secondary operations: Dies to pierce, semi pierce, and shearform
- know the importance of the selection of automatic feeds

MINIMAL STANDARDS/PERFORMANCE OBJECTIVES

Following classroom lecture and instructors demonstrations the student will:

- A. Set up cylindrical grinder for each project to be cylindrical ground in accordance to the blueprint specifications.
- B. Set up shaper and machine all flat surfaces in accordance to the blueprint specifications.
- C. Setup drill press and drill and ream all holes in accordance to the blueprint specifications.
- D. Know the essential Die-to-Press relationships.
- E. Know secondary operations: Dies to pierce, semipierce, and shearform.
- F. Know the importance of the selection of automatic feeds.

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 last 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 machine tools: measure of man's progress, measuring tools: semi-precision and precision, bench tools: including layout tools, power saws: power hack saws, band machines, drill presses: types, setups and operations, engine lathes: types, accessories and attachments, and engine lathes: cutting tools, setups and operations.
- 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 glass must be provided by the student
- test will be closed book and will cover all topics addressed since the last test. Test may consist of short answer, multiple choice, true or false, or fill in the blank.

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 216 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 completed 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:

Student should be able to use a surface grinder, a milling machine, a cylindrical grinder, a shaper and a drill press to machine industrial projects as specified by instructor.

PREREQUISITES

MTT 215

CO-REQUISITES

None

TOPIC/CONTENT OUTLINE

- A. Proper material
- B. Grind on surface grinder
- C. Mill on milling machine
- D. Grind on cylindrical grinder
- E. Flat machining on shaper
- F. Drill and ream

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.

