

University of Florida
Dept. of Chemistry
CHM 5416L
Course Syllabus

A: Course Description

CHM 5416L:

An emphasis on the safe use of machine tools including, Drill presses, Lathes, Milling Machines and Grinders. Knowledge of blueprint reading and basic mechanical drawing.

B: Course Objectives

Upon completion of this course the student should be able to:

- Work safely in machine shop.
- Measure machined parts to within .001 tolerances.
- Select proper feeds and speeds for all machines.
- Grind and set up lathe tools.
- Perform facing, turning, boring and thread cutting operations on the lathe.
- Set up and operate the milling machine.
- Operate drill press.
- Use taps and dies for threading.
- Read and understand blueprints as well as have the ability to submit detailed drawings for parts to be machined.

C: Methods of instruction

- 1: Brief lecture on shop practices
- 2: Demonstration and practice
- 3: Questions and discussion
- 4: Group and individual instruction

D: Evaluation of student achievement

1. Accuracy and finish of completed project
2. Performance with machine shop equipment
3. Attendance

E: Course content

The following topics will be covered in the course:

- Shop safety
- Precision and semi-precision measurement
- Tool selection
- Operation of shop equipment
- Material selection
- Basic mechanical drawing
- Tolerances
- Dimensioning

