

COURSE OUTLINE

ENGINEERING 150
Computer Aided Drafting Lab

I. Catalog Statement

Engineering 150 allows students or industry workers to improve and update their engineering and architecture skills. Techniques are practiced using engineering software. Inspection standards for the purpose of job advancement are presented.

Total Lecture Units: 0.0

Total Laboratory Units: 2.0

Total Course Units: 2.0

Total Lecture Hours: 0.0

Total Laboratory Hours: 96.0

Total Faculty Contact Hours: 96

Prerequisite: None.

II. Course Entry Expectations

Skill Level Ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 3.

III. Course Exit Standards

Upon successful completion of required coursework the student will be able to:

1. Use current Windows based computer-aided design (AUTOCAD) software to accomplish objectives 2, 3, 4 and 5.
2. Create standard libraries.
3. Create specialized libraries.
4. Demonstrate design item recall in system operation.
5. Create drawing formats.

IV. Course Content

Total Contact Hours = 96

- A. Introduction to advanced CAD systems
1. Identification of hardware components
 2. Task logic
 3. Demonstration of system operation

20 hours

- B. Basics of part creation and filing 20 hours
 - 1. Command syntax
 - 2. On-line documentation
 - 3. Special control keys
 - 4. Entity construction commands

- C. Error correction procedures 20 hours
 - 1. Space and retype
 - 2. Rub out
 - 3. Ctrl-Q
 - 4. File
 - 5. Verify

- D. Advanced dimensions techniques 20 hours
 - 1. Associative techniques
 - 2. Non-associative techniques

- E. Views 16 hours
 - 1. 3-D construction technique
 - 2. Execute file
 - 3. File management
 - 4. Design key files

V. Methods of Presentation

The following instructional methodologies may be used in the course:

- 1. lecture
- 2. demonstration

VI. Assignments and Methods of Evaluation

- 1. Students will be involved in performance tests.
- 2. Specific drafting problems will be assigned and inspected by the instructor.

Special Features

Use of specialized numerical control equipment under the guidance of the instructor.

VII. Textbooks

AUTOCAD 14 Guide. [1st Edition]. Prentice Hall, 1998.

10th Grade Reading Level

VIII. Student Learning Outcomes:

1. Student will be able to use current Windows based computer-aided design (AUTOCAD) software.
2. Student will be able to create standard libraries.
3. Student will be able to create specialized libraries.
4. Student will be able to demonstrate design item recall in system operation.
5. Student will be able to create drawing formats.