

COURSE PREFIX/NO: EGT 151
COURSE TITLE: Introduction to CAD
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 operation of a computer-aided drafting system. The course includes interaction with a CAD station to produce technical drawings.

COURSE COMPETENCIES

Upon successful completion of this course, the student should be competent to perform the following tasks:

Module 1:

- Describe and demonstrate the 2D CAD start up procedures,
- Explain how to use the various components of the CAD software for creating 2D drawings

Module 2:

- Perform data entry procedures,
- Perform graphic entity drawing commands,

Module 3:

- Explain and use the various SNAP options for creation of graphic entities,

Module 4:

- Create various graphic entities such as lines, circles, arcs, polygons, fillets, chamfers, and splines, based upon available data to show mastery of the various techniques available for entity creation,

Module 5:

- Utilize basic graphic entity editing commands, such as Mirror, Scale, Move, Line Type, Layer, Color, Size, and Color to either generate or modify graphic entities.

MINIMAL STANDARDS/PERFORMANCE OBJECTIVES

- A. Given instruction on basic CAD commands, the student will produce a minimum of ten drawings using ProCAD software with 60% accuracy.
- B. Given instruction on basic CAD commands, the student will demonstrate knowledge of the software by completing a minimum of five written quizzes with a minimum accuracy of 60% on each.

COURSE REQUIREMENTS

Students are responsible for attaining competencies through completion of the following course requirements:

ATTENDANCE

The student should adhere to the attendance policy set forth in the York Technical College Student Handbook. "Students must attend 90% 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.

Students 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 CAD procedures.

LAB REQUIREMENTS

During the lab, students must work individually. The instructor must see the completed project.

EVALUATION STRATEGIES/GRADING

Students will be expected to complete five written tests and ten graded drawings. Minimum score of 70% will be required on each test or drawing. Students who score below 70% may request a retest at the instructor's discretion. Maximum retest score will be 80%. Each test will be 15% of the final grade, and each graded drawing will be 2.5% of the final grade.

Evaluation Method

The final grade for EGT 151 will be as follows:

| | |
|--------------------|-------|
| Module #1 Test: | 15.0% |
| Module #2 Test: | 15.0% |
| Module #3 Test: | 15.0% |
| Module #4 Test: | 15.0% |
| Module #5 Test: | 15.0% |
| Graded Drawing 1: | 2.5% |
| Graded Drawing 2: | 2.5% |
| Graded Drawing 3: | 2.5% |
| Graded Drawing 4: | 2.5% |
| Graded Drawing 5: | 2.5% |
| Graded Drawing 6: | 2.5% |
| Graded Drawing 7: | 2.5% |
| Graded Drawing 8: | 2.5% |
| Graded Drawing 9: | 2.5% |
| Graded Drawing 10: | 2.5% |

The grading scale is as follows:

Grade Points

A 90 - 100

B 80 - 89

C 70 - 79

D 60 - 69

F 00 – 59

ENTRY LEVEL SKILLS

Student should have basic blueprint reading skills and basic computer operation skills.

PREREQUISITE: EGT 128

CO-REQUISITES: None

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.
2. Review the units online with D2L.

Disability Statement: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Office (SRO) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.

TOPIC/CONTENT OUTLINE

Module #1 Getting Started:

This module introduces the student to the ProCAD software. It also leads the student through a typical CAD project from start to finish of the drawing process.

Module #2 Learning the Basics:

This module helps the student get started drawing using lines and circles. It also teaches the student how to correct mistakes, measure graphic entities, save files, Zoom and Pan within the graphics screen, trim graphic entities, and customize the graphics screen.

Module #3 Selecting a Coordinate Location:

This module teaches the student how to use the SNAP Icons to place graphic entities at the desired location.

Module 4 Creating Graphic Entities:

This module goes into great detail in teaching the student how to create lines, circles, fillets, chamfers, arcs, polygons, and splines. The student is also given more detailed instruction on how to properly trim circles.

Module 5 Manipulating Graphic Entities:

This module shows the student how to manipulate graphic entities with the Utility functions such as Edit, Mirror, Rotate, Move, Scale, Group/Ungroup, and Break/Explode. The module also teaches the student how to remove identical graphic entities that have been accidentally drawn on top of each other. The module also teaches the student how to capture information from the CAD file and how to combine two or more drawings.