

SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Design & Drafting Technology Program
Revision Date: August 22, 2022

I. CATALOG DESCRIPTION

Course Number: DDRT1120
Course Title: Basic Computer Aided Drafting
Prerequisite(s): None
Catalog Description: Fundamentals of 2-D computer aided drafting using the most current version of AutoCAD. Instruction on software settings, layer creation, display controls and drawing set up. Introduction to the Cartesian coordinate system. Instruction on annotations, dimensions, plotting procedures, and file management.
Credit Hours: 2
Class Hours: 15
Lab Hours: 45
Total Contact Hours: 60

II. COURSE OBJECTIVES: *Course will:*

- A. Utilize the most current version of AutoCAD.
- B. Explain the role of the Cartesian coordinate system in the generation of AutoCAD drawings.
- C. Discuss the six ways to draw in AutoCAD.
- D. Introduce drawing layers and naming conventions that conform to the industry standards.
- E. Demonstrate the application of the basic AutoCAD Draw commands.
- F. Demonstrate the application of the basic AutoCAD Modify commands.
- G. Discuss the application of single line and multiline text with and without leaders.
- H. Demonstrate the creation of attributes.
- I. Discuss how to scale a drawing.
- J. Discuss dimensioning procedures and dimension variables.
- K. Discuss the types of information and settings that are commonly contained in a drawing template.
- L. Demonstrate the use of external references.
- M. Discuss the manner in which AutoCAD plot settings will affect the lineweight and scale of the printed document.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

- A. Student Learning Outcomes: *Student will be able to:*
 - 1. Generate drawings using the six ways to draw in AutoCAD.
 - 2. Create new drawing layers with names that conform to standards.
 - 3. Create drawings using the basic draw commands.
 - 4. Edit drawings using the basic draw commands.
 - 5. Format and create single line and multiline text with and without leaders.
 - 6. Create title blocks, General, and Local notes that contain attributes.
 - 7. Create a template for each of the four sheet sizes commonly used that includes preformatted borders and basic drafting standards.
 - 8. Create a drawing with objects dimensioned to industry standards.
 - 9. Publish a drawing that uses an external reference and two different drawing scales.

10. Manipulate the AutoCAD plot settings to create a document to illustrate the correct scale and line weight.
- B. General Education Learning Outcomes (GELOs)
 1. GELO #6: Career and Life Skills
Outcome 4: Use digital technology effectively to access, manage, integrate, evaluate, and present information.

IV. CONTENT/TOPICAL OUTLINE

- A. AutoCAD overview
- B. Basic Drawing Commands
- C. Basic Editing Commands
- D. Annotations
- E. Plotting
- F. Blocks and Block Attributes
- G. External References

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s):
 1. Moss, Elise, *AutoCAD Fundamentals* (Refer to CID and/or instructor for current edition)
- B. Other Resources: data storage device

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 1. Lecture
 2. Demonstration
 3. Classroom discussion
 4. Instructional Handouts
 5. Power Point presentations
 6. Videos
 7. Field Trips

VII. METHODS OF EVALUATION

- A. Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
 1. Attendance and participation
 2. Daily assignments
 3. Written exams and/or quizzes
 4. Performance and observational assessment

VIII. SPECIFIC COURSE REQUIREMENTS

- A. Student must meet all of the following to receive a passing grade:
 1. Achieve passing grade of 60% or higher, based on SCC grading scale.
 2. Submit own work. Students turning in homework or drawings by someone other than themselves will receive a grade of 0% and will be referred to the Dean of Students for further disciplinary action.