

SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Design & Drafting Technology Program
Revision Date: August 2024

I. CATALOG DESCRIPTION

Course Number: DDRT1115
Course Title: Industrial Print Reading with AutoCAD
Prerequisite(s): None
Catalog Description: A study of the application of communication and documentation of basic design skills using industry accepted standards and practices. With hands on application of 2D design drafting using AutoCAD.

Credit Hours: 3
Class Hours: 30
Lab Hours: 45
Total Contact Hours: 75

II. COURSE OBJECTIVES: *Course will*

- A. Discuss different aspects of industry blueprint standards. Utilize the most current version of AutoCAD.
- B. Introduce drawing layers and naming conventions that conform to the industry standards.
- C. Demonstrate the application of the basic AutoCAD commands.
- D. Discuss the application of single line and multiline text with and without leaders.
- E. Demonstrate the creation of attributes.
- F. Discuss how to scale a drawing.
- G. Discuss dimensioning procedures and dimension variables.
- H. Discuss the types of information and settings that are commonly contained in a drawing template.
- I. Demonstrate the use of external references.
- J. Discuss the manner in which AutoCAD plot settings will affect the line-weight 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. Read, interpret and document information shown on several types of drawings and assemblies.
 - 2. Identify drafting standards.
 - 3. Read, interpret and create mechanical blueprints.
- B. General Education Learning Outcomes (GELOs)
 - 1. GELO #5: Analytical, Quantitative and Scientific Reasoning
Outcome 1: Understand and create logical arguments supported by quantitative and scientific evidence and communicate those arguments in a variety of formats.
 - 2. 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.** Introduction to Drafting Concepts
- B.** Lettering, Dimensioning & Freehand Sketching
- C.** Orthographic Projection
- D.** Detail & Assembly Drawings
- E.** Measurement Tools
- F.** Dimensioning & Tolerancing
- G.** Sectional Views & Pictorial Drawings
- H.** Title Blocks, List of Materials & Drawing Changes
- I.** Drawings for Manufacturing

V. INSTRUCTIONAL MATERIALS

- A.** Required Text(s): *Print Reading for Industry*, 10th Edition, and Lieblich, Moss, Elise, *AutoCAD 2022 Fundamentals (or newer)*

VI. METHODS OF PRESENTATION/INSTRUCTION

- A.** Methods of presentation typically include a combination of the following:
 - 1.** Lectures
 - 2.** Classroom demonstrations
 - 3.** Classroom discussions
 - 4.** Instructional handouts
 - 5.** Video presentations
 - 6.** Power Point presentations
 - 7.** Speaker(s)
 - 8.** Field Trip(s)

VII. METHODS OF EVALUATION

- A.** Methods of evaluation typically include a combination of the following:
 - 1.** Homework & In-Class Activities
 - 2.** Quizzes
 - 3.** Tests
 - 4.** Evaluation will be based on the number of points earned from the total points possible

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.