

Course Code: CAD 114

Course Title: Introduction to AutoCAD (Computer-Aided Drafting)

Department: Applied Sciences and Technologies

Effective Date: Summer 2026

PCS Code: 1.2 - Occupational/Technical Instruction

CIP Code: 15.1302

Repeatability: 0

Credit Hours

Catalog Notation: 2-0-2

Credit Hour Distribution:

Lecture: 2

Lab: 0

Clinical: 0

Total: 2

General Course Information

Catalog Description

Introduction to computer-aided drafting using AutoCAD software; architectural, mechanical, and electrical applications.

General Course Objectives

Students will learn the basics of computer-aided design using AutoCAD software including drawing aids, editing, and dimensioning.

Minimum Placement Levels

English	Reading	Math
Placement into ENG 098	Placement into CCS 098	Placement into MAT 059

Prerequisites

None

Methods of Evaluation

Students will be given a minimum of 4 labs, 1 exam, and 4 drawing quizzes.

Instructional Materials and Additional Supplies

AutoCad 2024 Tutorial First Level 2D Fundamentals, by Randy H. Shih, current software version.

Course Content

General Learning Outcomes (GLOs)

- **Critical Thinking and Information Literacy:** Students will demonstrate the ability to evaluate perspectives, evidence, and implications, and to locate, assess, and use information effectively.
- **Reasoning and Inquiry:** Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.
- **Technology:** Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Introduction to AutoCAD Utility Commands and Drawing Parameters: Unit, Limit, Grid, Snap, and Toggle Keys	1. Apply drawing aids available in the AutoCAD program.	5	0	0
Display Commands: Osnap, Polar Tracking, Zoom, Regen, Pan, View	1. Use zoom in and out to view drawings or sections of drawings.	2	0	0
Filing Procedures: Saving, File Types, Directories	1. Apply AutoCAD file management.	1	0	0
Modifying Commands: Erase, Move, Copy, Array, Mirror, Fillet, Trim, Extend, Stretch, Rotate, Scale, Offset, Measure, Undo, and Redo	1. Apply the AutoCAD modify commands, and practice editing commands for customizing drawing files.	5	0	0
Layer Property Commands: Line Weight, Line Type, Line Color, Freeze, Thaw, On, Off, and Lock	1. Create different layers with different properties. 2. Use the layer properties manager dialogue box.	2	0	0
Inquiry: Area, Distance, Angle	1. Analyze detailed information about drawings.	1	0	0
Plotting and Printing	1. Plot or print drawing files.	2	0	0
Block Commands: Block, Insert, Wblock	1. Create, edit, and insert blocks. 2. Use the customized block library.	1	0	0
Text Commands: Multi-line and Single-line Text	1. Create text to label drawings, including special characters and accessing different text styles.	3	0	0
Dimension Commands and Variables: Linear, Angular, Diameter, Radius, and Leader	1. Dimension drawings and change the related variables.	3	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Drawing Commands: Line, Arc, Circle, Ellipse, Polyline Hatch, Polygon, and Rectangle	1. Demonstrate how to draw and position basic geometric shapes.	3	0	0
Display Views: Plan, Elevation, Orthographic, Isometric	1. Differentiate between plan, elevation, orthographic, and isometric views. 2. Draw objects in the different views.	2	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	0	0