

Northwest Arkansas Community College
Business and Computer Information Systems Division

Discipline Code

DRFT

Course Number

2114

Course Title

AutoCAD I

Catalog Description

This course introduces students to the essential 2D drawing techniques and commands used to draw, edit, annotate, view, analyze, and plot drawings used for engineering and building design. Students will create small, real-world projects using the latest revision of AutoCAD software with an emphasis on mechanical and architectural documents.

Prerequisites

None

Credit Hours

4 Credit Hours

Contact hours

60 Contact Hours

Load hours

4 Load Hours

Semesters Offered

Fall, Spring, Summer on demand

ACTS Equivalent

None

Grade Mode

A-F

Learning Outcomes

Students will:

- Master the basic 2D AutoCAD drawing commands and concepts and demonstrate the ability to use them efficiently in a variety of design drafting applications
- Create objects in CAD using different data input techniques including object snaps, object snap tracking, polar tracking, and coordinates

- Edit objects and drawings using the 2D modification tools
- Demonstrate the ability to use 2D geometric construction techniques and principles to produce the standard views on manufacturing and construction documents
- Apply dimensions to architectural and mechanical drawings consistent with current industry standards
- Create tables graphic patterns, and standard blocks
- Place and manage external references on drawings
- Set up Layouts and Sheet Sets for plotting drawings
- Plot a drawing (layout)with multiple scales on a sheet

General Education Outcomes Supported

- Students can use college level math skills to solve CAD problems
- Students are proficient in their technical focus (Architectural/Civil/Mechanical)

Standard Practices

Topics list

- CAD interface and working with drawings and templates
- Units of measurement, the Cartesian coordinate system, and methods of invoking commands
- Creating objects in AutoCAD using standard 2D commands
- Basic editing tools and techniques
- Creating and managing layers
- Multi-line and single line text and tools
- Display options including zoom, pan, and viewports
- Object snaps, tracking
- Arranging and patterning objects
- Multi-view construction tools and techniques
- Dimensioning commands, concepts, and styles
- Table creation, graphic pattern creation, and standard block creation
- Layout and Sheet Set creation

Learning activities

Assessments

- Drawing assignments which demonstrate the ability to use 2D commands
- Creative Projects
- Final Project

Grading guidelines

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = 0-59%