

NorthWest Arkansas Community College
Business & Computer Information Systems Division
CAD Department Course Outline

DRFT 2114 – AutoCAD I (F, S, SUM)

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/Contact Hours/Load hours:

4/4/4

Target Audience/Transferability:

This course is one of the foundation courses for all degree options in CAD and should be taken during the first semester. DRFT 2114 is transferable to some 4-year institutions.

Student Learning Outcomes:

Students will:

- Use units of measurement and coordinate systems correctly to develop objects in AutoCAD
- 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
- Master the basic 2D CAD commands and concepts and demonstrate the ability to use them efficiently in a variety of design drafting applications
- Solve geometric construction problems using math skills along with CAD concepts and commands
- 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
- Plot drawings in model space

Topics:

- 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
- Multiline 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 and concepts

Forms of Assessment:

- Drawing assignments which demonstrate the ability to use 2D commands to construct, edit, and annotate geometric objects
- Tests/quizzes on CAD commands and concepts
- Final Project consisting of a completed drawing submitted electronically and on paper
- Final Exam consisting of a timed drawing project measuring mastery of 2D commands and concepts

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