DRFT 1310

Division: Career and Technical Education
Department: Drafting Technology
Course: DRFT 1310
Title: Advanced AutoCAD
Catalog Description:

This is a course in advanced AutoCAD operations to include advanced dimensioning and tolerancing concepts, sectioning, creating symbols and symbol libraries, using external references, and creating bills of materials with attributes. Also included is the creation of isometric drawings, the use of scripts and slide shows, and an introduction to three-dimensional drawings.

General Education Requirements: N/A
Semesters Offered: TBA
Credit/Time Requirement: Credit: 4; Lecture: 2; Lab: 5
Clock/Hour Requirements: 105
Offered for Non-Credit: No
Prerequisites: DRFT 1300

Corequisites: None

Justification:

This course is approved by the program advisory committee and corresponds to SUU course CCET 260 and Dixie course DRAF 2200.

Student Learning Outcomes:

Upon successful completion of this course, students will be able to:

- apply advanced geometric dimensioning and tolerancing methods to improve drawings
- understand and apply sectioning and graphic patterns to add detail to drawings
- know what symbols are, create symbol libraries, and apply symbols to increase drawing productivity
- know how to use external references in multiview layouts in drawings
- know how to create a bill of materials and assign attributes to enhance drawing details
- create isometric drawings with associated dimensioning
- know the basic principles for three-dimensional drawings
- understand and apply external commands, scripts, and slide shows for drawing presentations
- have a basic understanding of the Windows file manager.

Content:

Course objectives will be achieved by providing students with instructional and hands-on experiences in the following areas:

- advanced geometric dimensioning and tolerancing
- drawing section views and graphic patterns
- creating symbols and libraries for multiple use
- external references and multiview drawings
- assigning attributes and generating a bill of materials
- introduction to three-dimensional drawings
- external commands, scripts, and slide shows
- using the Windows file manager.

General Education Outcomes:

2) Write clearly, informatively, and persuasively.
Students are required to complete descriptive term-sheets which provide information about the vocabulary and terminology used in this specific area. The descriptions are reviewed, graded, and returned to students for improvement.

4) Retrieve, evaluate, interpret, and deliver information through a variety of traditional and electronic media.
Students will research information (i.e. styles, layouts, mechanical parts, connectors, fasteners, etc.) through the Internet, written manuals, journals, and other publications. This information is used to complete projects and assignments throughout the program.

6) Apply computational skills to a variety of contexts.
The field of drafting requires the combination of basic math, geometry, and algebra skills. Students will utilize these skills when producing drawings, cost estimates, and material lists.

9) Respond with informed sensitivity to an artistic work or experience.
In both mechanical and architectural drafting, the final product must be presented to the client. At this point in the process, students must recognize quality artistic efforts in order to be able to produce their own final presentation drawings.

Key Performance Indicators:

In class:

- Students will demonstrate mastery of course competencies by completing assignments/projects, tests, and quizzes. Assignments/projects are worth 75%, tests are worth 15%, and quizzes are worth 10% of the final grade.

Following class:

- The knowledge and skills acquired in this course will be demonstrated in subsequent courses. Students will also be able to demonstrate the skills necessary to be productive in occupations requiring the application of Computer Aided Drafting (CAD).

Representative Text and/or Supplies:

- *AutoCAD and its Applications Basic,* current edition, Goodheart-Wilcox Company, Inc.

Optimum Class Size: 12
Maximum Class Size: 20

Signatures:

I hereby submit this course syllabus:

Craig Conder, ,

I hereby find this course consistent with the goals and resources of the Drafting Technology Department:

Craig Conder, , , Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)