DRFT 1302

Division: Career and Technical Education
Department: Drafting Technology
Course: DRFT 1302
Title: Basic CAD
Catalog Description:

This course teaches drafting using Computer Aided Drafting software system. It includes enough exposure to the Windows operating system to create and manage files, create and read directories, and integrate CAD software as it applies to drawing files. It also includes using CAD commands to create drawings with various lines and shapes, using drawing display options, placing text on drawings, printing and plotting drawing files, using the editing commands, and using basic dimensioning.

General Education Requirements: N/A
Semesters Offered: TBA
Credit/Time Requirement: Credit: 3; Lecture: 2; Lab: 3
Clock/Hour Requirements: 75
Offered for Non-Credit: No
Prerequisites: None

Corequisites: None

Justification:

This course is approved by the program advisory committee and corresponds to similar courses being developed by UVSC, SLCC, CEU, and SUU. The material represents new state of the art software being implemented in industry which incorporates modeling in 3D. It provides learners with employability skills which will better prepare them for future vocational success.

Student Learning Outcomes:

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

- understand and apply the Windows system to create, manage, and work with drawing files and directories
- use the CAD system to set up drawings, save drawings, and work with basic CAD commands to draw lines and basic shapes
- edit drawings and make changes in drawings and layouts
- know the CAD commands for geometric construction and apply drawing options
- place appropriate text and notes on drawings
- understand how to obtain hard copy of drawings using a plotter and printer
- know and apply the application of polylines in drawings
- use procedures and commands in working with large complicated drawings
- know how to place basic dimensions on drawings.

Content:

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

- using Windows with the CAD system to create, store, and manage files and directories
- introduction to computer-aided drafting, starting the CAD system software, and setting up drawing files
- introduction to drawings and drawing aids
- drawing lines, polylines, multiple lines, and shapes
- editing drawings by erasing and changing lines and shapes
- using geometric construction in creating drawings
- placing text and notes on drawings
- printing and plotting drawings
- creating multiple objects and obtaining information about drawings
- using multiview drawings and procedures for working with large, complex drawings
- basic dimensioning practices.

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 critique and improvement.

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.

8) Apply ethical reasoning to a variety of contexts.
The client-designer relationship requires an understanding of ethical behaviors in design and consultation. Draftsmen often work in teams where the individuals are each required to fulfill responsibilities under the direction of a team leader. This experience is modeled throughout the program.

Applied Education Outcomes:

1) Students will acquire entry-level skills specific to and appropriate for employment in their chosen field of study.
Students are required to complete the required course objectives. The objectives are discussed in class and the students then apply drafting procedures to accomplish the objectives.

- Students that complete the course will be offered the opportunity to take the state CAD certification exam.
- Students are informed of what employment opportunities are available if they succeed in this course.

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.

- Percentages are approximate.

Following class:

- The knowledge and skills acquired in this course will be demonstrated in subsequent courses.

Representative Text and/or Supplies:

- Texts will be selected as appropriate to the CAD system currently in operation.

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)