



DRFT 2180

Division: Career and Technical Education

Department: Drafting Technology

Course: DRFT 2180

Title: Pipe Drafting

Catalog Description:

This course introduces students to basic pipe drafting, including terms and symbols used in both single-line and double-line pipe drawings. It includes fittings and connections, such as welded, screwed, soldered, flanged, and bell or spigot. It also uses the Computer Aided Drafting (CAD) to develop drawings.

General Education Requirements: N/A

Semesters Offered: TBA

Credit/Time Requirement: Credit: 2; Lecture: 1; Lab: 2

Clock/Hour Requirements: 45

Offered for Non-Credit: No

Prerequisites: DRFT 1200

Corequisites: None

Justification:

This course is approved by the program advisory committee and corresponds to UVSC course DT 2040 and SLCC course EDDT 2360.

Student Learning Outcomes:

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

- understand the basic terms, symbols, and standard drawing techniques that apply to drawing pipe layouts
- know and apply drawing specifications for different pipes and fittings
- properly represent valves and instruments on a drawing and understand their functions
- know the requirements for representing pumps, tanks, vessels, and other associated equipment on a drawing
- understand the significance and application of a flow diagram
- properly construct piping plans and elevations
- know the purpose of notes, abbreviations, and revisions on piping drawings and the manner in which they are applied
- construct and read piping isometric drawings
- know what piping spools are and how the drawings are constructed to allow shop construction.

Content:

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

following areas:

- the pipe drafting process, terms, and definitions
- pipes and fittings
- valves and instruments
- pumps, tanks, vessels, and equipment
- flow diagrams
- piping plans and elevations
- notes, abbreviations, and elevations
- piping isometrics
- piping spools.

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.

5) Apply a cultural and historical awareness to a variety of phenomena.

Students must understand the historical aspects of architectural styles and the methods utilized in the drafting field. This historical perspective is addressed in lecture and students are required to identify styles through exams and projects.

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.

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 employment positions which use pipe drafting capabilities.

Representative Text and/or Supplies:

- *Process Pipe Drafting*, 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)