DRFT 2500

Division: Career and Technical Education
Department: Drafting Technology
Course: DRFT 2500
Title: Electro-Mechanical Drafting
Catalog Description:

This course is a fundamental course in electro-mechanical drawing comprised of electrical/electronic symbols, outlines, diagrams, and different types of drawings. It includes basic electrical theory and construction of different types of diagrams.

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 1010, DRFT 1300

Corequisites: None

Justification:

This course is approved by the program advisory committee and corresponds to UVSC course DT 1010, Dixie College course ITE 2320 and SLCC course EDDT 2180.

Student Learning Outcomes:

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

- know terms, definitions, and drawings that apply to electro-mechanical drafting
- understand the basic fundamentals of electricity and electrical sources
- learn the basic diagrams and symbols that apply to electrical drawings
- know how to draw basic circuits using the proper schematic diagrams and symbols
- understand the basic principles that apply to printed wiring boards
- know the basic laws that apply to electrical and electronic schematics
- know the basic principles of electrical power fields
- learn the purpose of wiring codes and how to draw basic electrical plans for buildings.

Content:

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

- a basic introduction to electrical terms, definitions, and symbols and how to apply them in a drawing
- basic principles of electricity

- principles and sources of electricity
- wiring diagrams and the graphic symbols used in them
- printed wiring boards
- electrical/electronic applications
- electrical power fields
- electrical drawing for architectural plans.

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.

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 by successful application in employment positions using electro-mechanical drafting.

Representative Text and/or Supplies:

- *Electrical and Electronic Drawing,* current edition, Glencoe Publishers.

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)