DRFT 2100

Division: Career and Technical Education
Department: Drafting Technology
Course: DRFT 2100
Title: Architectural Drafting
Catalog Description:

This course includes the completion of a full set of residential house plans, including schedules and details. The course comprehensively covers architectural drafting fundamentals and procedures used to represent design ideas and the solving of problems related to a basic house design. It also includes producing drawings that employ traditional methods, as well as Computer Aided Drafting (CAD) systems.

General Education Requirements: N/A
Semesters Offered: TBA
Credit/Time Requirement: Credit: 4; Lecture: 3; Lab: 3
Clock/Hour Requirements: 90
Offered for Non-Credit: No
Prerequisites: DRFT 1100 and DRFT 1010 or be concurrently enrolled in DRFT 1010

Corequisites: None

Justification:

This course is approved by the program advisory committee and corresponds to SLCC course ARCH 2060, UVSC course DT 2100, WSU course DG 2350 and Dixie course DRFT 2300.

Student Learning Outcomes:

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

- understand the definition and purpose of plot plan
- comprehend the use of bearing angles, contour lines, and topographic features
- show competency in the procedure for drawing a plot plan
- understand the different footing shapes and specifications for footings, foundation walls, and slab foundations
- know the application for pier and post foundations, wood foundations, beams and girders, lintels, and concrete masonry basement walls
- know the definition and purpose of the foundation plan
- understand the use of symbols on the foundation plan
- show competency in the procedure for drawing a footing/foundation plan
- understand the difference between platform and balloon framing
- know how to design and specify basic usage of joists and beams, floor trusses, sub floors, cantilevered joists and framing under slate on tile
- know about post and beam construction

- understand typical construction such as: ceiling, masonry wall, roof and wood framing
- represent different door and window symbols correctly
- show competency in the procedure for drawing door and window schedules
- compare and contrast the various types of stairs
- understand basic stair design, stair calculations, and drawing procedures
- compare the various types of fireplaces appropriate for a modern residence
- identify the parts of a standard masonry fireplace and chimney
- use a fireplace design data chart
- know the difference between a radiant and circulating stove
- list the information required on a typical floor plan
- design and draw a residential floor plan using accepted symbols and techniques
- dimension a floor plan in a clear and precise manner
- know the different types of roof designs
- describe the construction of a typical frame roof
- compile the appropriate information to order roof trusses for a specific dwelling
- show competency in the procedure for drawing a roof framing plan with truss details
- identify and list the symbols, features, and dimensions commonly shown on elevators
- show competency in the procedure for drawing elevation plans
- plan for the electrical needs of a modern home
- identify and list the symbols and typical residential electrical terms
- show competency in the procedure for drawing electrical plans
- identify and list the symbols and typical residential plumbing terms
- show competency in the procedure for drawing plumbing plans
- understand the different types of heating and cooling systems
- show competency in the procedure for drawing a climate control plan.

Content:

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

- footings, foundations, and concrete
- platform and balloon framing
- post and beam construction and special construction methods
- masonry wall construction
- door and window schedules
- stair types and design criteria
- fireplace design considerations
- fireplace specifications and details
- traditional frame roof construction
- roof trusses, ventilation, and flashing
- compare and contrast the different types of roofs
- definition and purpose of exterior elevators
- definition and purpose of the electrical plan
- water and waste removal systems
- definition, purpose, and required information for the plumbing plan
- definition, purpose, and required information on a climate control plan

- procedure for drawing in a basic set of residential house 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.

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

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.

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:

- Students will demonstrate skills on customer projects.

Representative Text and/or Supplies:

- *Architectural Residential Drawing and Design,* current edition, Goodheart-Wilcox Company, Inc.
- Accompanying workbook

Optimum Class Size: 12
Maximum Class Size: 15

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)