DRFT 1100

Division: Career and Technical Education
Department: Drafting Technology
Course: DRFT 1100
Title: Architecture-Residential Design
Catalog Description:

The emphasis of this course is comprehensive coverage of design fundamentals and procedures used to represent design ideas using traditional, as well as state of the art technology. It covers the solving of problems related to the design of a residential structure and considers the influence of building cost, modular applications, building codes, and zoning regulations with respect to the site and design.

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 SLCC course ARCH 1100 and WSU course DG 1350.

Student Learning Outcomes:

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

- identify the historical influences that helped shape today s home designs
- recognize and describe the elements of contemporary dwellings
- recognize the four basic house designs
- list the chief advantages of each design
- map the traffic circulation for maximum efficiency
- compare the relative cost of heating and cooling for each design
- evaluate a given site with respect to important considerations, such as restrictions, zoning, code, and topographical features
- list family needs that should be considered when planning a dwelling
- describe the basic construction drawings used to build a structure
- list and explain the use of architectural drafting equipment
- discern the difference between size and scale
- reproduce the standard alphabet of lines
- demonstrate an acceptable architectural lettering style

- explain the use of several architectural drawing time savers
- discuss factors that are important in the design of bedrooms, closets, and bathrooms
- plan the size and location of closets for a typical residence
- identify the rooms and areas that comprise the living area
- apply design principles to planning a living room, dining room, and a family recreation room
- design a functional entry way and foyer
- synthesize patios, porches, and courts into the total floor plan of a dwelling
- apply good design principles to planning the service area of a home
- design a functional kitchen and modern, efficient clothes care center
- describe appropriate dimensions for a garage space
- list various career options in architecture and residential construction
- compare the duties and educational requirements of various occupations in architecture and construction.

Content:

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

- historical influences that helped shape home design
- contemporary home designs with emphasis on the structure as related to the local environment
- trends in residential architecture
- four basic designs
- traffic circulation in terms of functional analysis
- site considerations as a part of the total planning process
- font basic designs with respect to advantages, disadvantages, characteristics, and variations within each design
- community influence in terms of planning a particular residence
- zoning and codes that affect building practices in the local area
- topographic features
- describing in detail the various drawings included in a set of construction documents
- use of scale, alphabet of lines, architectural style letters, and drawing time savers
- bedroom, bathroom, and storage areas of the home
- living rooms, dining rooms, family rooms, special purpose rooms, entryways, and foyers
- patios, porches, and courts
- service area of the home
- kitchens, clothes care centers, garages, and carports
- career opportunities:
    - architect, architectural drafters, and illustrators
    - specification writer and estimator
    - surveyor and construction technologist.

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.

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:

- Upon completion of the course, students' knowledge and skills will be demonstrated in more advanced architectural classes and on customer projects.

Representative Text and/or Supplies:

- Clois E. Kicklighter, *Architecture: Residential Drawing and Design,* 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)