University of Arkansas - Fort Smith
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General Syllabus

DFTG 2554 Architectural Construction Techniques

Credit Hours: 4 Lecture Hours: 4 Lab Hours: 0

Prerequisite: DFTG 2534 Architectural Computer-Aided Design (CAD) Applications

Effective Catalog: 2023-2024

I. Course Information

A. Catalog Description

Introduction to design concepts and common terminology used by the architectural industry. Contains information used by architects for construction drawing development, naming conventions, view types, building materials, local regulations and building codes.

B. Additional Information

The course progresses from Engineering Graphics I and Architectural Computer-Aided Design (CAD) Applications. Broad based skills and information are presented which relate directly to current standards of architectural drafting. The students will complete plan sets for residential and commercial projects typical of those completed in a professional architectural firm.

This course is designed to provide the student with a basic knowledge of building codes and regulatory agencies, sustainable design practices (LEED), architectural and structural materials, site planning, and the organization of architectural drawings and specifications for residential and commercial projects. Construction documents prepared by other disciplines such as civil, mechanical, & electrical engineers will also be reviewed to gain an understanding of the interdependent relationship between design disciplines.

II. Student Learning Outcomes

A. Subject Matter

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

1. Prepare the components of a set of construction drawings typical for residential and commercial architectural projects under the direction of a lead architect.

2. Use materials appropriately in the development of detail drawings and wall sections.
3. Research and identify applicable building codes, zoning regulations, and other design constraints.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Quantitative Reasoning - Students will apply good dimensioning practices to construction drawings to ensure clarity and constructability of completed drawings.

III. Major Course Topics

A. The Design Team: Roles & Responsibilities
1. Architecture
2. Engineers
3. Related Fields

B. Architectural View Types
1. Symbols, nomenclature, abbreviations, and definitions
2. Floor Plans
3. Exterior Building Elevations
4. Millwork Elevations
5. Building Sections
6. Wall Sections & Enlarged Views
7. Door and Window Schedules
8. Reflected Ceiling Plan
9. Roofing Plan
10. Isometric Views

C. Construction Methods
1. Wood Construction: Light Frame & Heavy Timber
2. Steel Frame Construction: Light Gauge & Structural Steel
3. Masonry Construction: Brick & Concrete Masonry
4. Interior Wall Types & Finishes

D. Residential Design
1. Construction Specifications
2. Interior Layout & Room Relationships
3. Exterior Design Styles & Considerations
4. Environmental Design & Energy Efficiency

E. Site Planning
1. Orientation Considerations
2. Coordinate Systems, Legal Descriptions, and Easements.

3. Surveys, Subdivision Plats & Property Boundaries
4. Topography & Site Drainage