

Number & Title of Course:

ARCH 2060 Building Technology I, 4 credits

Course Description:

Students will study practices utilized in the erection of residential buildings including architectural materials, methods and use, and structural, mechanical, and electrical systems

Course Goals:

This course will develop a fundamental understanding of the various components of a building project's systems and will familiarize the student with the creation of construction documents.

Course Objectives:

After completing this course, the student will be able to:

- prepare technically clear drawings
- prepare outline specifications
- create models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.
- demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.
- use principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.
- use basic principles employed in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.

Student Performance Criteria addressed:

B.4 Technical Documents

B.5 Structural Systems

B.7 Building Envelope Systems + Assemblies

B.8 Building Materials + Assemblies

Topical Outline:

Architectural Materials and Methods (40%) Civil/Site Work (5%) Structural Systems (10%)

HVAC Systems (10%) Plumbing Systems (10%) Electrical Systems (10%)

Sustainability (5%) Construction Cost Controls (5%) Building and Zoning Codes (5%)

Prerequisites:

None

Textbooks/Learning Resources:

Edward Allen et.al., *Fundamentals of Residential Construction*

Francis Ching, *Building Construction Illustrated, 5th Edition*

Offered:

Fall, Annually

Faculty assigned:

Kirk L Morpew, Professor of Architecture