

Course Description

ARC2461 | Architectural Materials and Construction 1 | 4.00 credits

An introduction to basic materials and methods of building construction. Emphasis is on wood, concrete, unit masonry, and light steel construction. Laboratory projects may include working drawings interpretation, sketching construction details, or field trips to construction sites and fabricant plants. Designed primarily as the initial materials and methods course for architectural transfer students. Prerequisite: ARC1126 or BCN1251. Laboratory fee.

Course Competencies:

Competency 1: The student will analyze the fundamental properties and characteristics of wood, concrete, unit masonry, and light steel construction materials to inform construction method selection and design decision-making by:

1. Evaluating the structural integrity of wood, concrete, unit masonry, and light steel construction materials to guide construction method selection and design decisions
2. Comparing the durability and sustainability of various materials to inform construction method selection and design decision-making
3. Assessing the cost-effectiveness and performance of materials to support construction decisions

Competency 2: The student will demonstrate proficiency in interpreting working drawings, sketching construction details, and applying practical knowledge by:

1. Mastering the art of interpreting working drawings, sketching construction details, and applying practical knowledge in construction projects
2. Showcasing expertise in interpreting working drawings, applying practical knowledge, and understanding sketching construction details to elevate construction proficiency

Competency 3: The student will apply theoretical and practical knowledge of building construction materials and methods to effectively communicate construction concepts and proposals through sketching, working drawings, and site observations by:

1. Utilizing theoretical and practical knowledge of building construction materials and methods to eloquently communicate construction concepts and proposals through sketching, working drawings, and site observations
2. Integrating theoretical and practical knowledge through sketching, working drawings, and site observations
3. Harnessing theoretical and practical knowledge from site observations and communicating them through sketching and working drawings

Learning Outcomes:

- Solve problems using critical and creative thinking and scientific reasoning
- Demonstrate an appreciation for aesthetics and creative activities
- Describe how natural systems function and recognize the impact of humans on the environment