

**ARCH 241 ARCHITECTURAL PRACTICE 2.1**

4 Units, Required Lecture/Activity Course, Fall Quarter

**DESCRIPTION:**

The history, concepts and methods associated with the use and application of construction systems, processes and materials.  
2 lectures, 2 activities.  
Prerequisite ARCH 123 or 133. Co-requisite: ARCH 251

**LECTURE****OBJECTIVES:**

The student completing this course will be aware of:

- History, manufacturing, nomenclature, and construction techniques for major building materials.
- The various materials of construction in present day use.
- The potential for development of new materials.
- The intricacies of the building industry.
- The regulatory constraints of the design/building industry.
- The sequential process of building.
- The methods of manipulation and fabrication of building materials.
- The basic structural forces that buildings must resist

The student completing this course will understand:

- The limitations of the materials use and effect on design.
- The concepts of appropriateness of materials section.
- The process by which materials are integrated.
- Various methods of construction.
- The interaction of the various participants in the design/building industry.
- How structural forces are transferred through the building.

The student completing this course will be able to:

- Select appropriate materials based on their characteristics.
- Identify materials and connecting methods.

**CONTENTS:**

The common lecture defines the shared content for the course. The activity portion of the course will be jointly developed by the faculty member providing the lecture and those teaching the associated design studio (ARCH 251). The specific form taken by the activity assignments will vary to support the development of content understanding applicable in the design studio and/or to facilitate the integration of the course content into the studio.

## Lecture Schedule

Week 1: Intro & the Building Process; Structural Forces & Foundations  
Week 2: The Material; Building with Wood  
Week 3: Wood - Interior & Exterior Finishes; Alternative Materials & Review  
Week 4: Quiz #1; Steel - The Material  
Week 5: Building with Steel; Steel - Interior & Exterior Finishes  
Week 6: Masonry - The Material; Building with Masonry  
Week 7: Finishes; Alternative Materials  
Week 8: Quiz #2; Alternative Materials & Review  
Week 9: Concrete - The Material; Building with Concrete & Finishes  
Week 10: Roofing & Moisture Protection; Glass, Glazing, Windows & Doors; Insulation (Plumbing & Electrical) & Review  
Finals Week: Quiz #3 will occur during the scheduled time during finals week

The Activity portion of the course will include a series of exercises that allow students to investigate the nature of selected materials and their application in Architectural design, detailing and construction.

**REQUIREMENTS & INSTRUCTIONS:**

## Assessment

The lecture grade will be based on the average of three non-cumulative tests given during the quarter and will count 50% of the course grade. Two non-cumulative tests (a midterm and a final) will provide a grade in the lecture component of the class (50% of total).

The activity grade will be based on the student's completion of a series of hands-on assignments and will count 50% of the course grade.

A pass in both lecture and activity sections will be required to complete the class.

## Textbook:

Edward Allen, Fundamentals of Building Construction, J. Wiley and Sons.

**ACTIVITY:****OBJECTIVES:**