

**ARC 242: BUILDING TECHNOLOGY I: WOOD**

**3 credits**

**Course Description:** Introduction to basic materials and components used in light wood frame construction. A survey of manufacturing methods, sizes, performance characteristics, quality, finishes and applications. Use of vendors’ brochures and standard references. Preparation of working drawings in light wood frame construction. Prerequisite: ARC 122, 271. Prerequisite to: ARC341.Restricted to major. Studio Fee: \$36.

**Course Goals and Objectives:**

Upon completion of this course, the student will:

1. Understand and experience the process of creating a set of construction documents for a wood light frame building.
2. Understand the principles, materials, means and methods, and sustainable design issues for wood light frame construction.
3. Research, analyze, and develop construction documents for a wood light frame building.
4. Understand the legal responsibilities of the architect and interior designer with respect to public health, safety, and welfare in dealing with codes, regulations, and standards applicable to residential construction.
5. Competent and appropriate use of BIM software in the generation of construction documents and other drawings/models.
6. Understand the attributes of wood that allow it to succeed as a material for building.
7. Learn the basic tenants of the construction of a light frame building through an exploration of the materials used to create it.
8. 8: Understand the realities of architecture being an assembly of parts that are joined together.

**NAAB Student Performance Criteria:**

**A.4:** Technical Documentation **B.2:** Accessibility **B.3:** Sustainability  
**B.7:** Financial Considerations **B.10:** Building Envelope Systems  
**B.12:** Building Materials and Assemblies **C.1:** Collaborative Skills

**Topical Outline**

**Percentages of Time**

I. Lecture Materials	30%	-
Wood, Light Frame Construction, Construction Docs.		
II. Building Project Development	40%	
-Creation of a Document Set, BIM		
III. Construction Exercises	30%	

**Textbooks:**

Mehta, Madan, Scarborough, Walter, and Armpriest, Diane. *Building construction:principles, materials, and systems*. Upper Saddle River, NJ: Pearson; Prentice Hall, 2010.  
Zumthor, Peter. *Thinking architecture*. (2<sup>nd</sup> ed.). Berlin, Germany: Birkhauser, 2006.  
Winkel, Steven, Collins, David, & Juroszek, Steven. *Residential building codes illustrated: A guide to understanding the 2009 international residential code*. Hoboken, NJ: Wiley, 2010.

**Offered:** Spring semester

**Faculty:** Schwartz