

**Number & Title of Course:** ARCH 341 Architectural Practice 3.1 (lecture component).

**Course Description:** Continuation of Arch 242 plus the concepts, methods, and processes and building systems that pertain to the detailing and construction of large-scale steel and concrete structures. 2 lectures, 2 discussions.

**Program Goals & Course Outcomes**

- Make reasonable decisions based on an architectural understanding of ethics, diversity, and sustainability.
  - Understanding multiple narratives in the history of architecture and cultural norms in a variety of settings (A7).
- Understand and apply the technical aspects of architectural design, building systems and construction materials considering the environmental impact of such decisions.
  - Ability to design sites, facilities, and systems that respond to relevant codes and regulations while reflecting life-safety and accessibility standards (B3).
  - Ability to demonstrate the basic principles of structural systems as well as their selection and application (B5).
  - Understanding the selection and application of building envelope systems (B7).
  - Understanding the selection and application of building materials and assemblies (B8).
  - Understanding the selection and application of building service systems (B9).
- Synthesize a wide range of variables that contribute to an integrated design solution.
  - Understanding the research methods used during the design process (C1).

**Student Performance Criteria Addressed**

A7 History and Global Culture  
 B3 Egress and Accessibility  
 B5 Structural Systems  
 B7 Building Envelope Systems and Assemblies  
 B8 Building Materials and Assemblies  
 B9 Building Service Systems  
 C1 Research

**Topical Outline**

History and theory of building technology (20%)  
 Steel building systems (20%)  
 Concrete building systems (20%)  
 Envelope and enclosure (10%)  
 Mechanical systems (10%)  
 Circulation and egress (10%)  
 Contemporary practice (10%)

**Prerequisites:** ARCH 242 and ARCH 253. Corequisite with ARCH 351.

**Textbooks/Learning Resources**

Allen, Edward and Joseph Iano. *The Architects Studio Companion*. New York:, 2012.  
 \_\_\_\_\_. *The Fundamentals of Building Construction*. Hoboken: Wiley, 2009.  
 Bachman, Leonard. *Integrated Buildings*. Hoboken: Wiley, 2002.  
 Banham, Reyner. *The Architecture of the Well-Tempered Environment*. Chicago: University of Chicago, 1984.  
 Ching, Francis. *Building Structures Illustrated: Patterns, Systems, and Design*. Hoboken: Wiley, 2009.  
 Kieran, Stephen, and James Timberlake. *Prefabricating Architecture*. New York: McGraw Hill, 2004.  
 Lindsey, Bruce. *Digital Gehry*. New York: Princeton Architectural Press, 2002.

**Offered:** Fall annually.

**Faculty Assigned:** Mark Cabrinha (Associate Professor) and Stephen Phillips (Associate Professor).