

**Course Description:** This comprehensive design studio focuses the knowledge and skills developed in all previous courses on a single project. The course emphasizes the design integration of the building's structural and environmental systems. Not for graduate credit. Co-requisite: ARC 482. Prerequisites: ARC 342, 362, 451, 481. Restricted to major. Studio Fee: \$72.

**Course Goals and Objectives:**

Upon completion of this course, the student will:

1. Focus the acquired skills and knowledge into the comprehensive design of an architectural project.
2. Demonstrate the integration of structural, environmental and building systems in the setting of an architectural project.
3. Emphasize the design development, drawing documentation, and model presentation of the project.
4. Respond to natural and built site characteristics in the development of a program and design of a project.
5. Access, select, and integrate structural systems, environmental systems, life-safety systems, building envelope systems, and building service systems into building design.
6. Demonstrate an understanding of the codes, regulations, and standards applicable to a given site and building design, including occupancy classifications, allowable building heights and areas, allowable construction types, separation requirements, occupancy requirements, means of egress, fire protection, and structure.
7. Identify the fundamentals of development financing, building economics, and construction cost control within the framework of a design project.
8. Assess, select, configure, and detail an integral part of the design and select appropriate combinations of building materials, components, and assemblies to satisfy the requirements of building program.
9. Make technically precise descriptions and documentation of a proposed design for the purpose of review and construction.
10. Produce an architectural project informed by a comprehensive program, from schematic design through the detail development of programmatic spaces, structural and environmental systems, life-safety provisions, wall sections, and building assemblies, as may be appropriate; and to assess the completed project with respect to the program's design criteria.
11. Demonstrate the principles of sustainable design through the successful integration of the issues of program response, context, site analysis, orientation, climate, materials, tectonics, structure, environmental systems, day lighting, and codes into a design project of moderate complexity.

**NAAB Student Performance Criteria:**

**A.2:** Design Thinking Skills **A.4:** Technical Documentation **A.5:** Investigative Skills  
**A.7:** Use of Precedents **A.9:** Historical Traditions and Global Culture  
**B.1:** Pre-Design **B.2:** Accessibility **B.3:** Sustainability **B.4:** Site Design **B.5:** Life Safety  
**B.6:** Comprehensive Design:  
A.2, A.4, A.5, A.8, A.9, B.2, B.3, B.4, B.5, B.8, B.9  
**B.8:** Environmental Systems **B.9:** Structural Systems **B.10:** Building Envelope Systems  
**B.11:** Building Service Systems **B.12:** Building Materials and Assemblies  
**C.3:** Client Role in Architecture **C.7:** Legal Responsibilities

<b>Topical Outline</b>	<b>Percentages of time</b>	
I. Program Development Research	5%	A.
B. Analysis		
II. Site Analysis Data collection B. Analysis	5%	A.
III. Concept Development Formulation of concept B. Communication of concept	15%	A.
IV. Schematic Design Design realization B. Design process C. Communication of design	25%	A.
V. Design Development Development process B. Communication process	25%	A.
VI. Design Documentation Documentation development B. Documentation process C. Documentation	25%	A.

**Textbooks:** None

**Offered:** Spring semester

**Faculty:** Lach, Anz, McDonald