

# ARCHITECTURE

**Director of undergraduate studies:** Bimal Mendis, 328 RDH, 432-8325, bimal.mendis@yale.edu; architecture.yale.edu

Architecture is a humanistic endeavor. The purpose of the undergraduate major is to include the study of architecture within a comprehensive liberal arts education, drawing from the broader academic and professional environment of the Yale School of Architecture. The curriculum includes work in design; in history, theory, and criticism of architecture; and in urban studies, and leads to a bachelor of arts degree with a major in Architecture. As a liberal arts major in Yale College, it is not an accredited professional degree program. For accredited professional degree programs, refer to the requirements of the National Architectural Accrediting Board (NAAB).

## INTRODUCTORY COURSES FOR NONMAJORS AND MAJORS

Introductory courses are ARCH 150, 200, and 280. They are open to all Yale College students and are required for those interested in the Architecture major prior to application. Interested students may also consider courses such as ARCH 260, 261, or STCY 176.

## PREREQUISITES

Three courses are prerequisite for all concentrations: ARCH 150, 200, and 280.

## REQUIREMENTS OF THE MAJOR

**The major for the Class of 2018** Students in the Class of 2018 must fulfill the requirements of the major that were in place when they entered the major, as described in previous editions of this bulletin.

**The major for the Class of 2019** With DUS approval, the following changes to the requirements of the major may be fulfilled by students who declared their major under previous requirements.

**The major for the Class of 2020 and subsequent classes** Students majoring in Architecture are required to take fifteen course credits, including prerequisites and the senior requirement. Majors are expected to take the three prerequisites by the end of their sophomore year and to complete a core of four courses, for five course credits, by the end of their junior year. They must also base their studies in one of three areas of concentration: Design; History, Theory, and Criticism; or Urban Studies. Majors are also required to complete three orientation sessions: digital media orientation, library orientation, and shop orientation. Within the concentrations, electives are categorized under four broad subject areas: history and theory of architecture; urbanism and landscape; materials and design; and structures and computation.

**Design concentration** The Design concentration explores the role of architecture in shaping the world around us. It introduces complex processes involved in solving spatial and programmatic problems. Creative work is grounded in the study of history and culture, and in the analysis of social conditions influencing architecture. Design studios provide a forum for production and discourse. Studio projects address issues of architectural form, space, composition, site, tectonics, and programs within broader humanistic ideals.

For the Design concentration, the following additional courses are required:

1. A core of four courses, the studio courses ARCH 250 and 251 taken during the junior year after the student is accepted into the major; and the history of architecture surveys ARCH 260 and 261, to be completed by the end of the junior year
2. One elective in history ARCH 260 and theory of architecture chosen from ARCH 341, 348, 431, or other relevant course in History of Art approved by the DUS
3. One elective in urbanism and landscape chosen from ARCH 344, 345, 347, 348, 385, STCY 176, or other relevant course in American Studies; Ethics, Politics, and Economics; Environmental Studies; or Political Science approved by the DUS
4. One elective in materials and design chosen from ARCH 162 or another relevant course in Environmental Studies approved by the DUS
5. One elective in structures and computation chosen from ARCH 161, an approved calculus or physics course, or other relevant course approved by the DUS (Elementary calculus is strongly recommended as preparation for graduate studies in Architecture.)
6. The senior requirement ARCH 450 and 494

**History, Theory, and Criticism concentration** The History, Theory, and Criticism concentration is intended to establish a broad historical and intellectual framework for the study of architecture. An interdisciplinary approach is encouraged through additional courses taken in various fields of humanities and social sciences. Normally these interdisciplinary courses address subjects closely linked to architectural history, theory, and criticism. Such courses may include archaeology, history of religion, aesthetics, philosophy, or visual culture. Permission of the DUS is required if the courses fall outside the specified course of studies. During their senior year students complete a written senior essay on a topic approved by the faculty.

For the History, Theory, and Criticism concentration, the following additional courses are required:

1. A core of four courses, the studio course ARCH 250 or 360 taken during the fall term of junior year; ARCH 362 or an elective taken during the spring term of junior year; and the history of architecture surveys ARCH 260 and 261 to be completed by the end of junior year
2. Four electives in history and theory of architecture, chosen from ARCH 341, 348, 431, or other relevant courses in History of Art approved by the DUS
3. One elective in urbanism and landscape chosen from ARCH 344, 345, 347, 348, 385, STCY 176, or other relevant course in American Studies; Ethics, Politics, and Economics; Environmental Studies; or Political Science approved by the DUS
4. The senior requirement ARCH 490 and 491

**Urban Studies concentration** The Urban Studies concentration encourages a broad, interdisciplinary investigation of the complex forces that shape the urban physical environment. The sequence of courses culminates in a senior essay that builds on course work, and either develops analysis and planning proposals for a specific site or furthers an individual research agenda.

For the Urban Studies concentration, the following additional courses are required:

1. A core of four required courses, ARCH 360 and 362 taken during the junior year; and ARCH 341 and 345, to be completed by the end of the junior year
2. Four electives in urbanism and landscape chosen from ARCH 344, 345, 347, 348, 385, STCY 176, or other relevant courses in American Studies; Ethics, Politics, and Economics; Environmental Studies; or Political Science approved by the DUS
3. One elective in history and theory of architecture chosen from ARCH 341, 348, 431, or other relevant course in History of Art approved by the DUS
4. The senior requirement ARCH 490 and 491

**Digital media orientation** All Architecture students are required to complete orientation sessions in digital media workshop and materials laboratory. Students enrolled in ARCH 200 are required to complete these sessions at the beginning of the spring term of the sophomore year. Access to digital media equipment will not be allowed until the required orientation sessions have been completed. Questions should be addressed to the DUS or the director of digital media, John Eberhart (432-9655, john.eberhart@yale.edu).

**Library orientation** The Architecture program requires all students to complete a ninety-minute introductory library research session. Students enrolled in ARCH 200 must take this session at the beginning of the spring term of the sophomore year. Failure to complete the required orientation will preclude completion of the major. Students may offer no substitutions for this orientation. Students should register with the Haas Family Arts Library Public Services Librarian, Lindsay King (436-8052, lindsay.king@yale.edu). Questions should be addressed to the DUS.

**Shop orientation** The Architecture program requires all majors to complete several woodshop and materials lab orientation sessions. Students enrolled in ARCH 200, and interested in using the shop, must take these sessions during the first weeks of the spring term of the sophomore year. Access to the woodshop and materials lab will not be allowed until the required orientation sessions have been completed. Questions should be addressed to the DUS or to the shop coordinator, Timothy Newton (432-7234, timothy.newton@yale.edu).

#### SENIOR REQUIREMENT

Seniors in the Design track take ARCH 450 in the fall term and 494 in the spring term. Seniors in the History, Theory, and Criticism track and in the Urban Studies track take ARCH 490 in the fall term and 491 in the spring term. Proposals for senior projects and essays are submitted in the fall term for review and approval by the senior project coordinator; they are then distributed to faculty members for review. Upon successful review, students may ask faculty members to act as senior advisers. Senior essays and projects for ARCH 491 are due in the office of the DUS by Friday, April 13, 2018. Design projects for ARCH 494 are due as specified by the course instructor. All seniors must submit a portfolio of their work to the office of the DUS by Friday, May 4, 2018. For all architecture majors, this portfolio must be representative of the student's design work including prerequisites and the senior project. History, Theory, and Criticism majors and Urban Studies majors must also include a copy of the senior essay and other appropriate texts.

#### ADVISING AND APPLICATION TO THE MAJOR

Yale College students interested in the Design concentration must apply to enter the major during the spring term of their sophomore year, after taking ARCH 150, 200, and 280. An application to the major must be submitted to the office of the DUS no later than 4 p.m. on March 30, 2018, in 328 Rudolph (third floor). All applications are reviewed by a faculty committee. Applications must include the following information: name, address, telephone number, courses related to architecture already taken, a statement of purpose, and a writing sample from Yale College. Portfolios representative of course work for ARCH 150, 200, and 280 must also be submitted for review as part of the application process by May 1, 2018. Applicants will be notified in writing regarding acceptance to the major by May 25, 2018.

Students interested in the History, Theory, and Criticism and Urban Studies concentrations do not have to apply to the major, but must submit a statement of interest in early May, by the end of their sophomore year. Students have an opportunity to petition the DUS at the end of either the fall or spring term of their junior year if they wish to change concentrations. The DUS will notify students of the result of such a petition. Based on a student's performance in required courses, the DUS may also recommend a change in concentration.

**Courses in the School of Architecture** Unless otherwise indicated in the course descriptions, all courses in the School of Architecture are open to majors and nonmajors with permission of the instructor and the graduate registrar. They are not available for the Credit/D/Fail option. Students are admitted on the basis of their previous course work and previous performance.

## REQUIREMENTS OF THE MAJOR

**Prerequisites** ARCH 150, 200, and 280

**Number of courses** 15 course credits (incl prereqs and senior req)

**Specific courses required** *Design*—ARCH 250, 251, 260, 261; *History, Theory, and Criticism*—ARCH 250 or 360, ARCH 362 or elective, ARCH 260 and 261; *Urban Studies*—ARCH 360, 362, 341, 345

**Distribution of courses** *Design*—1 elective in history and theory of arch, 1 in urbanism and landscape, 1 in materials and design, 1 in structures and computation, all approved by DUS; *History, Theory, and Criticism*—4 electives in history and theory of arch, 1 in urbanism and landscape, all approved by DUS; *Urban Studies*—4 electives in urbanism and landscape, 1 in history and theory of arch, all approved by DUS

**Other** Orientation sessions in digital media, library, and shop

**Senior requirement** *All concentrations*—portfolio representative of design work, including prereqs and senior req; *Design*—ARCH 450 and 494; *History, Theory, and Criticism and Urban Studies*—ARCH 490 and 491

---

## MEMBERS OF THE SCHOOL OF ARCHITECTURE TEACHING IN YALE COLLEGE

**Professors** D. Michelle Addington, Turner Brooks (*Adjunct*), Keller Easterling, Alexander Garvin (*Adjunct*), Steven Harris (*Adjunct*), Alan Plattus, Alexander Purves (*Emeritus*)

**Associate Professor** Eeva-Liisa Pelkonen

**Assistant Professors** Sunil Bald (*Adjunct*), Bimal Mendis (*Adjunct*), Kyoung Sun Moon, W. Todd Reisz (*Visiting*), Elihu Rubin

**Lecturers** Victor Agran, Karla Britton, Ariane Lourie Harrison, Daniel Sherer

**Critics** Marta Justo Caldeira, Andrei Harwell, Adam Hopfner, Joyce Hsiang, Timothy Newton

---

## Courses

\* **ARCH 005a, Modern Architecture and the City** Karla Britton

Issues in modern American architecture and urbanism examined through the work of prominent architects closely associated with Yale and New Haven. Perspectives on the character, development, and sociocultural consequences of building today. Enrollment limited to freshmen. Preregistration required; see under Freshman Seminar Program. HU

\* **ARCH 009b / CPSC 078b, See it, Change it, Make it** Julie Dorsey

Hands-on introduction to the theory and practice of digital capture, modeling, and fabrication. Topics include digital representations of shape, 3D scanning, shape modeling and editing, and physical production, including 3D printing, milling, and laser cutting. Architectural forms at a variety of scales used as vehicles for exploration and experimentation. There are no course prerequisites. Students are expected to be proficient in high school-level algebra, trigonometry, and geometry. No prior knowledge of architecture is expected. Enrollment limited to freshmen. Preregistration required; see under Freshman Seminar Program. QR

**ARCH 150a, Introduction to Architecture** Alexander Purves

Lectures and readings in the language of architecture. Architectural vocabulary, elements, functions, and ideals. Notebooks and projects required. Not open to freshmen. Required for all Architecture majors. HU

\* **ARCH 154b, Drawing Architecture** Victor Agran

Introduction to the visual and analytical skills necessary to communicate architectural ideas. Observation and documentation of architectural space on the Yale campus. Drawing exercises introduce the conventions of architectural representation: plan, section, elevation, and isometric drawings, as well as freehand perceptual drawings of architectural space. Open to first and second year students.

\* **ARCH 162b, Materials in Architecture** Timothy Newton

Science and technology of basic building materials studied together with historic and current design applications. Skills and processes required to create, shape, and connect materials experienced through hands-on projects. Technical notebooks, drawings, design and build exercises, and projects required. Enrollment limited to 20.

**ARCH 200b, Scales of Design** Bimal Mendis

Exploration of architecture at multiple scales from the human to the world. Consideration of how design influences and shapes the material and conceptual spheres through four distinct subjects: the human, the building, the city, and the world. Examination of the role of architects, as designers, in constructing and shaping the inhabited world. Lectures, readings, reviews and four assignments that address the spatial and visual ramifications of design. Prerequisites: None for non-majors; ARCH 150 for intended majors. HU

\* **ARCH 230a / STCY 176a, Introduction to the Study of the City** Alexander Garvin

An examination of forces shaping American cities and strategies for dealing with them. Topics include housing, commercial development, parks, zoning, urban renewal, landmark preservation, new towns, and suburbs. The course includes games, simulated problems, fieldwork, lectures, and discussion. SO

\* **ARCH 250a, Methods and Form in Architecture I** Rosalyne Shieh

Analysis of architectural design of specific places and structures. Analysis is governed by principles of form in landscape, program, ornament, and space, and includes design methods and techniques. Readings and studio exercises required. Enrollment limited to 25. Open only to Architecture majors. 1½ Course cr

\* **ARCH 251b, Methods and Form in Architecture II** Michael Schlabs

Continuation of ARCH 250. Analysis of architectural design of specific places and structures. Analysis is governed by principles of form in landscape, program, ornament, and space, and includes design methods and techniques. Readings and studio exercises required. 1½ Course cr

**ARCH 260a / HSAR 326a, History of Architecture I: Antiquity to the Baroque** Daniel Sherer

The first half of a two-term sequence in the history of architecture. Architecture and urbanism from ancient Egypt through Greek and Roman classical traditions to the Enlightenment. The formal expression – organizational, structural, and ornamental – and social context of specific buildings and urban areas. Architecture as a form of social expression that builds on its own stylistic development, articulating a response to changes in history and culture. Emphasis on Western architecture, with selections from other parts of the world. HU

**ARCH 262b / HSAR 332b, Modern Architecture From the Enlightenment to the Millennium** Craig Buckley and Eeva-Liisa Pelkonen

Introduction to the major buildings, projects, and debates of modern architecture and urbanism from its Enlightenment origins to the present. Consideration of design methods, representational tools, and construction techniques, which have shaped architectural practice, as well as modern architects' complex relationship with time. Study of the built environment through relevant primary texts and secondary sources.

**ARCH 280b / AMST 197b / HSAR 219b, American Architecture and Urbanism** Elihu Rubin

Introduction to the study of buildings, architects, architectural styles, and urban landscapes, viewed in their economic, political, social, and cultural contexts, from precolonial times to the present. Topics include: public and private investment in the built environment; the history of housing in America; the organization of architectural practice; race, gender, ethnicity and the right to the city; the social and political nature of city building; and the transnational nature of American architecture. HU

\* **ARCH 341a / GLBL 253a / LAST 318a, Globalization Space** Keller Easterling

Infrastructure space as a primary medium of change in global polity. Networks of trade, energy, communication, transportation, spatial products, finance, management, and labor, as well as new strains of political opportunity that reside within their spatial disposition. Case studies include free zones and automated ports around the world, satellite urbanism in South Asia, high-speed rail in Japan and the Middle East, agripoles in southern Spain, fiber optic submarine cable in East Africa, spatial products of tourism in North Korea, and management platforms of the International Organization for Standardization. HU

**ARCH 345b, Civic Art: Introduction to Urban Design** Alan Plattus

Introduction to the history, analysis, and design of the urban landscape. Principles, processes, and contemporary theories of urban design; relationships between individual buildings, groups of buildings, and their larger physical and cultural contexts. Case studies from New Haven and other world cities. HU

\* **ARCH 360a, Urban Lab I: An Urban World** Joyce Hsiang

Understanding the urban environment through methods of research, spatial analysis, and diverse means of representation that address historical, social, political, and environmental issues that consider design at the scale of the entire world. Through timelines, maps, diagrams, collages and film, students frame a unique spatial problem and speculate on urbanization at the global scale. Prerequisites: For non-majors: permission of the instructor is required. For ARCH majors: ARCH 150, 200, and 280. HU 1½ Course cr

\* **ARCH 362b, Urban Lab II: City Making** Staff

How architects represent, analyze, construct, and speculate on critical urban conditions as distinct approaches to city making. Investigation of a case study analyzing urban morphologies and the spatial systems of a city through diverse means of representation that address historical, social, political, and environmental issues. Through maps, diagrams, collages and text, students learn to understand spatial problems and project urban interventions. Prerequisites: For non-majors: permission of the instructor is required. For ARCH majors: ARCH 150, 200, 280, and 360. 1½ Course cr

**ARCH 385a / AMST 198a / HIST 152a / PLSC 279a / SOCY 149a, New Haven and the American City** Elihu Rubin and Alan Plattus

Introduction to urban studies using New Haven as a model for the American city. Emphasis on historical development; urban planning; the built environment; transportation and infrastructure; reform and redevelopment; architecture and urban design; sustainability and equity. SO

\* **ARCH 390a / ENAS 410a, Making Spaces** Staff

A project based course. Borrowing from practices of adaptive reuse and spatial design, students use design thinking methodologies to carefully research an existing place or site and develop possible interventions that consider not only the physical space but also its function and purpose within a community.

\* **ARCH 450a, Senior Studio** Turner Brooks

Advanced problems with emphasis on architectural implications of contemporary cultural issues. The complex relationship among space, materials, and program. Emphasis on the development of representations—drawings and models—that effectively communicate architectural ideas. To be taken before ARCH 494. Enrollment limited to Architecture majors. 1½ Course cr

\* **ARCH 471a or b, Individual Tutorial** Bimal Mendis

Special courses may be established with individual members of the department only. The following conditions apply: (1) a prospectus describing the nature of the studio program and the readings to be covered must be approved by both the instructor and the director of undergraduate studies; (2) regular meetings must take place between student and instructor; (3) midterm and final reviews are required.

\* **ARCH 472La, Individual Tutorial Laboratory** Bimal Mendis

An independent tutorial focusing on methods and techniques of representation in architecture, including the synthesis of studio work using a variety of visual media. Concurrently with ARCH 471 or after a spring term abroad. RP ½ Course cr

\* **ARCH 490a, Senior Research Colloquium** Karla Britton

Research and writing colloquium for seniors in the Urban Studies and History, Theory, and Criticism tracks. Under guidance of the instructor and members of the Architecture faculty, students define their research proposals, shape a bibliography, improve research skills, and seek criticism of individual research agendas. Requirements include proposal drafts, comparative case study analyses, presentations to faculty, and the formation of a visual argument. Guest speakers and class trips to exhibitions, lectures, and special collections encourage use of Yale's resources.

\* **ARCH 491b, Senior Project** Elihu Rubin

An essay or project in the student's area of concentration. Students in the history, theory, and criticism track or in the urban studies track pursue independent research with an adviser; this project must terminate in a senior essay.

\* **ARCH 494b, Senior Project Design Studio** Sunil Bald

Individual design investigations, focusing on independence and precision in the deployment of design ideas. Reliance on visual and nonverbal presentations. Development of a three-dimensional component, such as large-scale mock details, or other visual means of presentation, which might include photography, film, video, or interactive media. Examination of the skills, topics, and preparation to support design research. 1½ Course cr