ARCHITECTURE

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

MEMBERS OF THE SCHOOL OF ARCHITECTURE TEACHING IN YALE COLLEGE

Professors D. Michelle Addington, Kent Bloomer (Adjunct), Turner Brooks (Adjunct), Peggy Deamer, Keller Easterling, Alexander Garvin (Adjunct), Steven Harris (Adjunct), Dolores Hayden, Alan Plattus, Alexander Purves (Emeritus)

Associate Professors Eeva-Liisa Pelkonen, Emmanuel Petit

Assistant Professors Kyoung Sun Moon, W. Todd Reisz (Visiting), Elihu Rubin

Lecturers Victor Agran, Karla Britton, Ariane Lourie Harrison, Amy Lelyveld, Daniel Sherer

Critics Katherine Davies, Andrei Harwell, Adam Hopfner, Joyce Hsiang, Bimal Mendis, Michael Young, I. Thomas Zook

Application to the Architecture major

Yale College students must apply to enter the major during the spring term of their sophomore year, after taking ARCH 150, 154, and 249. An application to the major must be submitted to the office of the director of undergraduate studies no later than 4 p.m. on March 28, 2014, in Room 328 RDH (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, 154, and 249 must also be submitted for review as part of the application process by May 1, 2014. Applicants must stipulate their first, second, and third choices for the three concentrations in the major. The concentrations, described below, are design; history, theory, and criticism; and urban studies. Although qualified students and students who have fulfilled the prerequisites may be admitted into the Architecture major, they will not necessarily be admitted to their first-choice concentration. Applicants will be notified in writing regarding acceptance to the major by May 30, 2014. The major is usually limited to twenty students in the junior year and twenty students in the senior year, with a maximum of sixteen students in the design concentration for each year. Students have an opportunity to petition the director of undergraduate studies at the end of either the fall or spring term of their junior year if they wish to change concentrations. The director of undergraduate studies will notify students of the result of such a petition.

Introduction to architecture

Introductory courses are ARCH 150, 154, and 249. They are open to all Yale College students except freshmen, and are required for those interested in the Architecture major prior to application. Freshmen may consider courses such as a freshman seminar, ARCH 260, 261, or STCY 176.

The standard major

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 (http://www.naab.org) (NAAB).

The design concentration 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. Teaching formats include lectures, studio workshops, and individual presentations that culminate in a senior project design studio. 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 director of undergraduate studies 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. History, theory, and criticism majors are also urged to study a foreign language. 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.

Requirements of the major

Students majoring in Architecture are required to take fifteen course credits. Majors are expected to take three prerequisites in their sophomore year, complete a core of five course credits by their junior year, and base their studies in one of three areas of concentration: (1) design, (2) history, theory, and criticism, or (3) urban studies.

The courses for all concentrations include three prerequisites: ARCH 150, 154, and 249. The core of five course credits required for all three concentrations include the studio courses ARCH 250 and 251 (to be 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). The electives are categorized under four broad subject areas: history and theory of architecture, urbanism and landscape, materials and technology, and structures and computation.

For the design concentration, the following additional courses are required:
1. ARCH 450, Senior Studio

2. ARCH 494 (the senior requirement)

3. One elective in history and theory of architecture chosen from the following: ARCH 341, 431, or other relevant course in History of Art approved by the director of undergraduate studies

4. One elective in urbanism and landscape chosen from the following: ARCH 340, 344, 345, 351; STCY 176; or other relevant course in American Studies, Ethics, Politics, and Economics, Environmental Studies, or Political Science approved by the director of undergraduate studies

5. One elective in materials and technology chosen from the following: ARCH 163, or other relevant course in Environmental Studies approved by the director of undergraduate studies

6. One elective in structures and computation chosen from the following: ARCH 161, an approved calculus or physics course, or other relevant course approved by the director of undergraduate studies. Elementary calculus is strongly recommended as preparation for graduate studies in Architecture

For the history, theory, and criticism concentration, the following additional courses are required:

1. ARCH 490 and 491 (the senior requirement)

2. Four electives in history and theory of architecture, chosen from the following: ARCH 341, 431, or other relevant courses in History of Art approved by the director of undergraduate studies

3. One elective in urbanism and landscape chosen from the following: ARCH 340, 344, 345, 351; STCY 176; or other relevant course in American Studies, Ethics, Politics, and Economics, Environmental Studies, or Political Science approved by the director of undergraduate studies

For the urban studies concentration, the following additional courses are required:

1. ARCH 495 and 491 (the senior requirement)

2. Four electives in urbanism and landscape chosen from the following: ARCH 340, 344, 345, 351; STCY 176; or other relevant courses approved by the director of undergraduate studies in American Studies, Ethics, Politics, and Economics, Environmental Studies, or Political Science

3. One elective in history and theory of architecture chosen from the following: ARCH 341, 431, or other relevant course in History of Art approved by the director of undergraduate studies

Digital media orientation  All Architecture students are required to complete orientation sessions in digital media workshop and materials laboratory. Students enrolled in ARCH 249 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 director of undergraduate studies 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 249 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 director of undergraduate studies.

Shop orientation  The Architecture program requires all majors to complete a three-hour woodshop and materials lab orientation session. Students enrolled in ARCH 249 must take this session during the first week of the spring term of the sophomore year. Access to the woodshop and materials lab will not be allowed until the orientation has been completed. Questions should be addressed to the director of undergraduate studies or to the shop coordinator (432-7234).

Senior requirement  Seniors in the design track take the senior project design studio (ARCH 494). Seniors in the history, theory, and criticism track take ARCH 490, the senior research colloquium, and 491, the senior project. Seniors in the urban studies track take ARCH 495, the senior research colloquium in urban studies, and 491, the senior project. Proposals for senior projects and essays are submitted in the fall term for review and approval by the senior project coordinator, and then distributed to faculty members for review before the faculty members agree to become senior advisers. Senior essays and projects (ARCH 491) are due in the office of the director of undergraduate studies by Friday, April 18, 2014. In the spring term, all seniors must submit a portfolio of their work to the office of the director of undergraduate studies by Thursday, May 1, 2014. For all 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.
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 open to 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, 154, 249
Number of courses  15 course credits (incl prereqs and senior req)
Specific courses required  All concentrations—ARCH 250, 251, 260, 261; Design—ARCH 450
Distribution of courses  Design — 1 elective in history and theory of architecture, 1 elective in urbanism and landscape, 1 elective in materials and technology, 1 elective in structures and computation, all approved by DUS; History, theory, and criticism — 4 electives in history and theory of architecture, 1 elective in urbanism and landscape, all approved by DUS; Urban studies — 4 electives in urbanism and landscape, 1 elective in history and theory of architecture, all approved by DUS
Other  Orientation sessions in digital media, library, and shop
Senior requirement  All concentrations — portfolio representative of design work, including prerequisites and the senior requirement;  
Design — ARCH 494; History, theory, and criticism — ARCH 490 and 491; Urban studies — ARCH 495 and 491

Courses

ARCH 150a, Introduction to Architecture  Alexander Purves
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. Not open to freshmen. Required for all Architecture majors.

*ARCH 161b, Introduction to Structures  Kyoung Sun Moon
Basic principles governing the behavior of building structures. Developments in structural form combined with the study of force systems, laws of statics, and mechanics of materials and members and their application to a variety of structural systems. Prerequisites: trigonometry and some knowledge of calculus. Enrollment limited to 20.  
QR, SC

*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 163b, Environment, Energy, Building  D. Michelle Addington
An introduction to energy and environmental issues faced by the discipline of architecture. Global environmental issues, basic principles of energy generation and energy use, and fundamental climatic precursors and patterns. The complexity of developing solutions that address a wide range of local and global concerns.

*ARCH 230b / STCY 176b, 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 249b, The Analytic Model  Emmanuel Petit
Introduction to the history and practice of architectural analysis. Students produce drawings, models, and diagrams of significant architectural works in order to facilitate a comprehensive understanding of specific architects, buildings, and contexts. Description of a variety of approaches and the reciprocal relationship between analysis and design. Required for all Architecture majors.

*ARCH 250a, Methods and Form in Architecture I  Bimal Mendis and staff
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  Joyce Hsiang and Sunil Bald
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, 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 261b / HSAR 325b, History of Architecture II: The Eighteenth Century to the Millennium  Eeva-Liisa Pelkonen

Modern architecture and urbanism from the eighteenth century to the end of the twentieth. Genesis and meaning of architectural form, applying national, cultural, and international contexts. **HU**

*ARCH 271a / HSAR 266a / HUMS 450a / MMES 126a / SAST 266a, Introduction to Islamic Architecture  Kishwar Rizvi

Introduction to the architecture of the Islamic world from the seventh century to the present, encompassing regions of Asia, North Africa, and Europe. A variety of sources and media, from architecture to urbanism and from travelogues to paintings, are used in an attempt to understand the diversity and richness of Islamic architecture. Field trip to the Metropolitan Museum of Art in New York. **HU**

ARCH 340a**G** / AMST 207a, American Cultural Landscapes: An Introduction to the History of the Built Environment  Dolores Hayden

Introduction to land use, transportation, urban planning, and vernacular architecture in the United States. After a brief review of Native American and colonial settlement patterns, the first half of the course deals with the development of cities from 1800 to 1920. The second half emphasizes suburban growth that transformed traditional downtowns and created diffuse metropolitan regions between 1920 and the present. **WR, HU, SO**

*ARCH 341a**G** / 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 344a, Urban Life and Landscape  Elihu Rubin

The built environment as a text tool for constructing narratives of human activity, aspiration, and struggle. Methods of viewing the ordinary landscape of the twentieth-century American city: pulling apart its historical layers, examining social meanings, and observing its function today. Modes of inquiry include video, public presentations, field trips, photography, and writing. **HU**

ARCH 345b, Civic Art: Introduction to Urban Design  Alan Plattus and Andrei Harwell

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 347b / PLSC 250b, Infrastructure: Politics and Design  Elihu Rubin

Infrastructures—the physical frameworks for human settlement, urbanization, and social life, including networks for transportation, water, energy, and communication. Current debates on infrastructure spending in the context of historical investments in the modern American city. **SO**

*ARCH 348b, The Benevolent City  W. Todd Reisz

Cities as places of violence, vice, and irrelevance vs. cities as stages where humanity reaches its most elevated heights of self-realization and cultural production. Critical review of writing about cities to identify recurring arguments and value systems. The question of whether cities should be expected to convey benevolence on their inhabitants. **WR, HU**

*ARCH 351b / AMST 381b, Poets' Landscapes  Dolores Hayden

Introduction to techniques poets have used to ground their work in the landscapes and buildings of American towns and cities including Chicago, New York, and Los Angeles. Attention to poems from a national automotive landscape as well as narrative poems about cities. Writing exercises in different poetic forms; readings from the works of Dickinson, Frost, Bishop, Lowell, Wilbur, Dickey, Pinsky, Cervantes, and Merrill. **WR, HU**

ARCH 431b, Religion and Modern Architecture  Karla Britton

The historical evolution of sacred building in the twentieth and twenty-first centuries. Relations between a building, its cultural environment, and its cult. The influence of religion in contemporary civic life as manifest in the design and construction of prominent religious buildings. Examination of mosques, synagogues, temples, and churches. Perspectives from philosophy, comparative religion, liturgical studies, and architectural theory and practice. **WR, HU**

*ARCH 450a, Senior Studio  Turner Brooks and Adam Hopfiner

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 or b, 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
Examination of the skills, topics, and preparation required for the research that students in the history, theory, and criticism track undertake for their senior project. Under the guidance of the instructor and members of the Architecture faculty and visitors, students present and define their proposals, complete basic readings, and seek criticism of individual research agendas.

*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  Steven Harris and Marta Justo Caldeira
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

*ARCH 495a, Senior Research Colloquium for Urban Studies  Karla Britton
Development of frameworks and urban strategies for senior projects and/or papers through identification and elaboration of a research topic that synthesizes the interdisciplinary course work of the urban studies curriculum with individual interests. Requirements include proposal drafts, case study research, analyses, and graphic illustrations.