ARCHITECTURE (ARCH)

* ARCH 006a, Architectures of Urbanism: Thinking, Seeing, Writing the Just City
  Michael Schlabs
What is architecture, and how is it conceived, relative to notions of the urban – to the broader, deeper, messier web of ideas, forms, and fantasies constituting “the city?” Can architecture play a role in defining the city, as such, or does the city’s political and social construction place it outside the scope of specifically architectural concerns? Likewise, what role can the city play in establishing, interrogating, and extrapolating the limits of architecture, whether as a practice, a discourse, or a physical manifestation of human endeavor in the material environment? This course addresses these and other, related questions, seeking to position art and architecture in their broader urban, social, cultural, political, intellectual, and aesthetic contexts. It explores issues of social justice as they relate to the material spaces of the modern city, and the manner in which those spaces are identified, codified, and made operative in service of aesthetic, social, and political experience. Enrollment limited to first-year students. Preregistration required; see under First-Year Seminar Program. Prerequisite: general knowledge of 20th-century history. HU

ARCH 150a, Introduction to Architecture  Alexander Purves and Trattie Davies
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  George Knight
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.

* ARCH 161a, Introduction to Structures  Erleen Hatfield
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 200b / URBN 200b, Scales of Design  Bimal Mendis
Exploration of architecture and urbanism 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 and urban world. Lectures, readings, reviews and four assignments that
address the spatial and visual ramifications of design. Not open to first-year students. Required for all Architecture majors. HU

* ARCH 250a or b, Methods and Form in Architecture I  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 260a / HSAR 326a, History of Architecture to 1750  Kyle Dugdale
Introduction to the history of architecture from antiquity to the dawn of the Enlightenment, focusing on narratives that continue to inform the present. The course begins in Africa and Mesopotamia, follows routes from the Mediterranean into Asia and back to Rome, Byzantium, and the Middle East, and then circulates back to mediaeval Europe, before juxtaposing the indigenous structures of Africa and America with the increasingly global fabrications of the Renaissance and Baroque. Emphasis on challenging preconceptions, developing visual intelligence, and learning to read architecture as a story that can both register and transcend place and time, embodying ideas within material structures that survive across the centuries in often unexpected ways. HU 0 Course cr

ARCH 280a / AMST 197a / HSAR 219a / URBN 280a, 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 0 Course cr

* ARCH 305a, Destruction, Continuation, and Creation –Architecture and Urbanism of Modern Japan  Yoko Kawai
This course examines how design philosophies and methodologies were developed in Japanese architecture during the 130-year period from the Meiji Restoration until the post-modern era. Special attention is paid to how the country’s cultural identity had been continuously relevant to modern society by evolving itself through natural disasters such as earthquakes, and political destructions such as wars. The methodologies and technologies for architecture and cities supported and were influenced by this constantly transforming, yet unchanging, Japanese culture. Historical photos and excerpts from films are used and a guided tour of a MET exhibition is held to better understand the context. Highlighted architects include Chuta Ito, Goichi Takeda, Frank Lloyd Wright, Kameki Tsuchiura, Sutemi Horiuchi, Kunio Maekawa, Kenzo Tange, Arata Isozaki, Fumihiko Maki, Kisho Kurokawa, Kazuo Shinohara, Tadao Ando, and Mirei Shigemori. HU

ARCH 312b / HSAR 312b, Modern Architecture in a Global Context, 1750-present  Craig Buckley
Architects, movements, and buildings central to the development of modern architecture from the mid eighteenth century through to the present. Common threads and differing conceptions of modern architecture around the globe. The relationship
of architecture to urban transformation; the formulation of new typologies; architects’ responses to new technologies and materials; changes in regimes of representation and media. Architects include Claude Nicolas Ledoux, Giovanni Battista Piranesi, John Soane, Frank Lloyd Wright, Le Corbusier, Ludwig Mies van der Rohe, Lina Bo Bardi, Louis Kahn, and Kenzo Tange. HU

* ARCH 314a / URBN 314a, History of Landscape in Western Europe and the United States: Antiquity to 1950  Warren Fuermann
This course is designed as an introductory survey of the history of landscape architecture and the wider, cultivated landscape in Western Europe and the United States from the Ancient Roman period to mid-twentieth century America. Included in the lectures, presented chronologically, are the gardens of Ancient Rome, medieval Europe, the early and late Italian Renaissance, 17th century France, 18th century Britain, 19th century Britain and America with its public and national parks, and mid-twentieth century America. The course focuses each week on one of these periods, analyzes in detail iconic gardens of the period, and place them within their historical and theoretical context. HU RP

* ARCH 325b / URBN 417b, Fugitive Practice: Introducing, Recentering, and Exploring Black and Indigenous Design Methods  Staff
This seminar introduces and explores Black, indigenous, and other historically marginalized modes of cultural production—collectively referred to here as “fugitive practices.” The course confronts the erasure (and re-centering) of these modes by rethinking the episteme of architecture—questioning history, planning, and urbanism—but also of the body, the design of objects, and making. Modes of sociocultural and aesthetic production explored in the course may include: improvisation in jazz, hip-hop and social dance; textiles of the Modern African Diaspora and indigenous peoples; informal economies; ingenuity in vernacular architecture; and others. The course is structured around seven two-week “modules,” each containing a seminar discussion, a design exercise, and a short written accompaniment. It is conducted in collaboration with a parallel seminar being offered by faculty at Howard University. HU RP

* ARCH 327a / URBN 327a, Difference and the City  Justin Moore
Four hundred and odd years after colonialism and racial capitalism brought twenty and odd people from Africa to the dispossessed indigenous land that would become the United States, the structures and systems that generate inequality and white supremacy persist. Our cities and their socioeconomic and built environments continue to exemplify difference. From housing and health to mobility and monuments, cities small and large, north and south, continue to demonstrate intractable disparities. The disparate impacts made apparent by the COVID-19 pandemic and the reinvigorated and global Black Lives Matter movement demanding change are remarkable. Change, of course, is another essential indicator of difference in urban environments, exemplified by the phenomena of disinvestment or gentrification. This course explores how issues like climate change and growing income inequality intersect with politics, culture, gender equality, immigration and migration, technology, and other considerations and forms of disruption.

* ARCH 328a / PHIL 435a, Intersections of Architecture and Philosophy  Andre Patrao
The relation between architecture and philosophy can be traced as far back as their early writings in Antiquity, and remains an influential force in the work of both fields.
to this day. But what do philosophers gain from architecture? And what do architects make of philosophy? Why do these two disciplines interact with one another, and how have they done so? The unprecedented variety of replies that emerged in the last century culminated in a period between the 60’s and the 90’s when their exchanges reached the most prolific, intense, radical, innovative, and transformative moment yet, producing iconic essays, projects, conferences, debates, and even collaborations. This seminar explores those major historical intersections of architecture and philosophy, through in-depth studies of their origins, debates, ideas, approaches, and repercussions. While laying out the architectural-philosophical canon of the recent past, the seminar simultaneously challenges students to push beyond it. Discussed authors include Ludwig Wittgenstein, Walter Benjamin, Martin Heidegger, Hannah Arendt, Roland Barthes, Michel Foucault, Jean Baudrillard, Jacques Derrida, Richard Rorty, Cornel West, Bruno Latour, Homi Bhabha, Graham Harman, Adolf Loos, Paul Engelmann, Sigfried Giedion, Christian Norberg-Schulz, Kenneth Frampton, Charles Jencks, Rem Koolhaas, Jean Nouvel, Peter Eisenman, Mark Wigley, Joan Ockman, and Albena Yaneva. Knowledge in architecture and/or philosophy or related fields is beneficial, but not compulsory.

* ARCH 332b, Cultural AI: Machine Vision, Art, and Design  Brennan Buck
More than any other technology, Artificial Intelligence (AI) promises to transform the fields of art and design over the next decade. In addition to its economic impact as it replaces and alters human labor, machine vision and cognition will alter and displace human creativity. Already, AI has added a series of invisible layers—filters and lenses—to how we see and create our environment. Understanding this new machine-mediated visual culture is critical to addressing its growth, finding potentials and opportunities for intervention, and identifying avenues for critique and resistance. Readings and discussion trace the historical role of algorithms in human culture and the understanding of creation and design as an algorithmic—even machinic—process. They chart the shift from the explicit code of software to the black box of machine learning and the birth of what Lev Manovich calls ‘cultural AI’—a filter over our collective imagination as technology is incorporated into image-making, -selection, and -viewing platforms. Students also work with AI platforms such as Runway ML to develop design proposals that take a critical and aesthetically specific stance on the current and impending impact of AI on cultural production.

* ARCH 341b / GLBL 253b / LAST 318b / URBN 341b, Globalization Space  Staff
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.

ARCH 345a / URBN 345a, 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.
* ARCH 360a / URBN 360a, Urban Lab: 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 363a / URBN 363a, Urban Lab: Stories and Counterstories  Anne Barrett
How do our constructed environments embody, maintain, and/or intensify dominant power structures and embedded biases, and how might we uncover fuller and more heterogeneous—if possibly discordant or uneasy—understandings of place? This is a multidisciplinary design-research seminar in which students learn and utilize visual methods of research and analysis to interrogate, exhume, examine, record, represent, and speculatively re-frame the social, political, architectural, ecological, economic, infrastructural, and material stories of place. We consider urban, suburban, and rural environments at multiple scales, from street names to planning resolutions, as we explore both visible and invisible spatial characteristics. Students select and work on their own research site, and respond to assignments organized around four conceptual themes/representational techniques (Monuments/Mappings; Spaces/Collage; Characters/Diagramming; Boundaries/Section). Work evolves cumulatively over the semester to produce the final project: a “visual anthology” of student sites.  1½ Course cr

* ARCH 380a / HSAR 437a / MMES 382a, The Global Museum  Kishwar Rizvi
When the Carters (Jay-Z and Beyonce) chose the Louvre Paris as the backdrop to their 2018 hit single, they were tapping into the cultural capital of the museum. Like its counterparts across the world, the Louvre has evolved from a princely collection to a national symbol and, today, to a global brand, with a franchise in Abu Dhabi which opened in 2017. This seminar analyzes how museums are utilized for a variety purposes, from the local to the transnational, and the relationship between their architectural design and their economic, social and urban impact. The class meets with curators and designers and takes a field trip to the Smithsonian museums in Washington, DC.  WR, HU

* ARCH 392b / ENGL 478b, Writing about Place  Cynthia Zarin
An exploration of reading and writing about place. Definitions of home; different meanings and intent of travel. Readings include exemplary contemporary essays from the eighteenth century to the present. Workshop for assigned student essays.  WR, HU

* 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  Michael Schlabs
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. For juniors and seniors with DUS approval; meetings by appointment with DUS.

* ARCH 472a or b, Individual Tutorial Lab  Michael Schlabs
  RP  ½ Course cr

* ARCH 490a / URBN 490a, Senior Research Colloquium  Marta Caldeira
  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 / URBN 491b, Senior Project  Marta Caldeira
  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  Gavin Hogben
  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