Architecture and urban landscape are the context for civic life. In an age of increasingly rapid technological and social change, these fields forge connections between our past and our future. This involves critical thinking about many complex contemporary issues, such as the relationship of public and private life, the interaction between formal and political ideas in cities, and the role of technology in the design, construction, and management of contemporary spaces. Because the process of design involves the synthesis of disparate elements, it can also translate into strategies for approaching a wide range of other problems not traditionally understood to be “architecture.” At Northeastern, we connect specific problem solving inherent to architectural and landscape architectural understanding with the larger context of contemporary cities.

The curriculum teaches students to conceptualize, synthesize, and represent complex architectural, urban, and environmental issues. The program focuses on core skills and critical thinking as preparation for both professional practice and advanced study. The curriculum encompasses two major themes: First, the studio projects focus on the art of building and environmental performance, and second, the projects explore how designed environments—from buildings to regional infrastructures—affect urban conditions. The art of building includes the study of construction and technology, as well as the cultural messages created by the expression of material, structure, and form. Environmental performance includes imagining how we can live more sustainably by developing innovative design solutions for synthesizing natural and urban conditions. The contemporary city is our laboratory. This urban focus requires that students integrate their own creative impulses with the future of the society of which they will be a part. By building on the practical and technical training afforded by co-op to develop core professional skills, the curriculum focuses on architecture and landscape architecture’s fundamental aesthetic, technological, social, and political aspects.

With the effective synthesis of the art of building and environmental performance with urban issues, Northeastern’s programs in architecture and urban landscape are becoming a leader in identifying opportunities for civic representation, urban development, and neighborhood design. Northeastern’s students are in demand because of their combination of professional competence and fluency in urban architectural and environmental design issues. There are opportunities for interdisciplinary cooperation in urban-oriented research and creative work in areas such as the economics of urban redevelopment; the design and planning of resilient food, water, energy, transit, and industrial systems; urban public policy; and new forms of spatial and visual communication. Additionally, Northeastern’s urban focus is applied globally in the semester abroad.

**External Transfers**
Full-time architecture faculty members may evaluate nonstudio courses for conformity with NU requirements using transcripts and course descriptions. Any student seeking studio course credit (drawing, technology, or design) must present a portfolio for review and evaluation.

**Portfolios are optional for freshman applicants.**

**Academic Progression Standards**
A minimum grade-point average (GPA) of 2.500 is required to remain in the majors of architecture or urban landscape. Students below this average will not be allowed to continue in these majors.

A minimum GPA of 2.000 is required to remain in the major of architectural studies. Students below this average will not be allowed to continue in the major.

To graduate, a student must have a 2.500 GPA in architecture or urban landscape.

**Preapproved Template Programs in Architecture and in Urban Landscape**
The School of Architecture offers preapproved template programs in architecture and in urban landscape. Each template program may be paired with another preapproved template program to create a combined major; to see a list of current preapproved template programs, visit the combined majors webpage (http://www.northeastern.edu/registrar/major-2.html).

Students may request admission to such a combined major via the Combined Major Approval form (http://www.northeastern.edu/registrar/form-maj-comb.pdf), which requires approval by both disciplines/colleges together with an approved curriculum. For additional information on preapproved template programs, see “Student-Requested Combined Major” (http://catalog.northeastern.edu/undergraduate/academic-policies-procedures/degrees-majors-minors/#stu-req). For template program requirements, visit the myNEU web portal (http://www.myneu.neu.edu), click on the “Self-Service” tab, then on “My Degree Audit.”

**Programs**

**Bachelor of Science (BS)**
- Architecture (http://catalog.northeastern.edu/undergraduate/arts-media-design/architecture/architecture-bs)
- Architectural Studies (http://catalog.northeastern.edu/undergraduate/arts-media-design/architecture/architectural-studies-bs)
- Architecture and English (http://catalog.northeastern.edu/undergraduate/arts-media-design/architecture/architecture-english-bs)
- Architecture and Graphic and Information Design (http://catalog.northeastern.edu/undergraduate/arts-media-design/architecture/architecture-graphic-information-design-bs)

**Bachelor of Landscape Architecture (BLA)**
- Landscape Architecture (http://catalog.northeastern.edu/undergraduate/arts-media-design/architecture/landscape-architecture-bla)
Minors

- Architectural History (http://catalog.northeastern.edu/undergraduate/arts-media-design/architecture/architectural-history-minor)
- Urban Landscape Studies (http://catalog.northeastern.edu/undergraduate/arts-media-design/architecture/urban-landscape-studies-minor)

Courses

Architecture Courses

ARCH 1000. Architecture at Northeastern. 1 Hour.
Introduces students pursuing a major in the School of Architecture to the intellectual and extracurricular opportunities within the school and within the College of Arts, Media and Design. Exposes students to the cultural vibrancy of Boston with the goal of building networks to facilitate the creation of a vibrant and supportive learning community.

ARCH 1030. Introduction to Architectural Education, Practice, and Culture. 2 Hours.
Seeks to answer the question of how architects work as problem solvers on a variety of scales and in collaboration with a variety of disciplines. Studies how architects frame problems, iteratively test options, and implement solutions that are both practical and creative. Considers both traditional and emerging modes of practice. Comprised of lectures, small-group discussions, readings, case studies, visits to local design offices, and field trips to important buildings and landscapes in the greater Boston area.

ARCH 1050. Introduction to Architectural Design. 4 Hours.
Offers students an opportunity for hands-on investigations in the design process. The course begins with instruction on representational techniques such as drawing and sketching, model making, diagramming, and collage, using Boston as a laboratory for investigation. Individual and group design work seeks to encourage the development of skills in critical thinking, leadership, collaboration, and graphic communication. Emphasizes a solutions-based approach to design problem solving. Also introduces students to studio culture, including regular individual desk critiques with instructors, collaborative working pinups, and formal reviews with guest critics.

ARCH 1110. Fundamental Architectural Representation. 6 Hours.
Introduces students to architectural representation as a form of documentation, experimentation, and communication, through a series of exercises in orthographic, axonometric, and perspective as well as physical modeling. Emphasizes the development of an iterative design methodology. Includes workshops in introductory digital media.

ARCH 1120. Fundamental Architectural Design. 6 Hours.
Introduces architectural design. Examines a number of approaches to spatial organization, massing, and envelope articulation through the analysis of pertinent case studies as well as through a series of fast-paced design exercises. Offers students an opportunity to develop a single design through a series of design studies that deal with issues of site planning, program, user input, and collective negotiation. Requires a portfolio demonstrating the student's representational abilities and iterative design process.

ARCH 1310. Architecture and Global Cultures, Prehistory to 1400. 4 Hours.
Offers a chronological history of civilizations from prehistory to 1400. Global in scope, introduces key themes including housing, the vernacular, materials and techniques, sacred architecture, architecture and power, and urban planning. Emphasizes the relationship between architectural works and the cultures that produce them.

ARCH 1311. Recitation for ARCH 1310. 0 Hours.
Offers a small-group discussion format to cover material in ARCH 1310.

ARCH 1320. Architecture and Global Cultures, 1400 to Present. 4 Hours.
Offers a chronological history of early modern architecture. Focuses on significant moments in Western culture as well as the architecture and planning of Mughal India, Ottoman Empire, and Japan. Continues major themes from ARCH 1310. Also covers ideal cities and urban planning, the relationship between theory and practice, the Enlightenment, the emergence of the professional architect, trade, colonization, and landscape.

ARCH 1321. Recitation for ARCH 1320. 0 Hours.
Offers a small-group discussion format to cover material in ARCH 1320.

ARCH 1350. American Architecture. 4 Hours.
Offers an introduction to the history, theory, and criticism of American architecture and urban planning from the mid-1600s to the 1930s. Explores the social and cultural forces that shape the built environment. Examines European influences as well as uniquely American contributions. Emphasizes the work of Louis Sullivan, H. H. Richardson, and Frank Lloyd Wright.

ARCH 1450. Understanding Design. 4 Hours.
Introduces undergraduates at all levels to the importance of design thinking as a method of inquiry and problem solving. Each class meeting includes a short presentation on a different kind of design problem (houses, furniture, electronics, automobiles, apparel, tools, interiors, cities, typography, information, tall buildings, networks, etc.) and then an interview with a leading practitioner at a roundtable on the stage. Evaluation is based on quizzes and student presentations. Seeks to expose students to the power of design thinking as a tool for multi-variable problem solving.

ARCH 1990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

ARCH 2130. Site, Space, and Program. 6 Hours.
Studies how to analyze, draw, and model the built environment. Students engage in issues of program, composition, type, and material. Offers students the opportunity to think conceptually about architectural design.

ARCH 2140. Urban Institutions. 6 Hours.
Studies how to analyze, model, and intervene in the city. Offers students an opportunity to engage in urban analysis, urban massing strategies, and architectural design of urban institutions.

ARCH 2170. Urban Research Studio: Context, Sustainability, Development. 6 Hours.
Seeks to develop students' technical skills and critical thinking in the studio environment through a semesterlong research and design project. Offers students an opportunity to investigate an urban site in the Boston area: investigating possible solutions, focusing on strengthening conceptual strategies, and articulating a developed argument through their research and design process.

ARCH 2240. Architectonic Systems. 4 Hours.
Introduces the theory of materials and structures. Examines basic structural elements in masonry and wood construction. Uses historical and current building types to explore the relationship between structure, materials, construction process, and architectural space. Includes lectures, discussions, field trips, and student presentation of structural models and diagrams.
ARCH 2250. Introduction to Sustainable Design in Architecture. 4 Hours.
Examines the principles of sustainable design, focusing on the key aspects of design thinking, focusing in particular on its relationship to architecture and how the specific skills of the architects are integral to its definition. At its core, design thinking offers a specific framework for innovation. By exposing students to the ways in which design thinking has been theorized and defined, offers students an opportunity to develop a more detailed understanding.

ARCH 2550. Real Estate Development and Design. 4 Hours.
Introduces the challenges and opportunities in real estate development for design professionals. Offers students an opportunity to obtain the knowledge and skills necessary to engage meaningfully in real estate development, which is exercised through application to real-life problems. Reviews the property types, terminology, and core concepts in the real estate industry; introduces a set of analytical tools and techniques for evaluating real estate investment and development; and explores innovation and entrepreneurship in real estate development practice models.

ARCH 2260. Introduction to Building Systems. 4 Hours.
Introduces fundamentals of building technology and explores technology as means and manifestation of architecture in the world. Using a systems approach, studies the interactions among natural forces, material properties, technological capabilities, and human cultural values and the ways these relationships give rise to architecture. Considers a series of physical principles—including gravity, moisture, heat, light, and air—to reveal specific architectural possibilities and material responses. Explores the ways design shapes the interaction of materials and forces to provide for human safety, shelter, comfort, and delight through a combination of hands-on workshops, seminal readings, and design exercises.

ARCH 2310. Chinese Architecture 1: Premodern. 4 Hours.
Covers the development of the built environment in China from prehistory to the nineteenth century. Emphasizes technological transformation, structural and stylistic evolution, cultural exchange, and ideological engagement.

ARCH 2320. Chinese Architecture 2: Modern. 4 Hours.
Covers the development of the built environment in China from 1840 to the present. Emphasizes educational and professional shifts in architectural practice, political engagement in the design process, structural and technological transformation, conceptual background, and global impact.

ARCH 2330. Architecture, Modernity, and the City, 1800 to 1910. 4 Hours.
Focuses on architecture and urban design in the United States and Europe from 1800 to 1910. Major topics include the birth of the modern city and urban planning, capitalism and industrialization, modern typologies, infrastructure, urban parks and early suburbs, materials and technology, Western architecture in colonial India and Asia, architectural education, and modern architectural theory.

ARCH 2331. Recitation for ARCH 2330. 0 Hours.
Offers a small-group discussion format to cover material in ARCH 2330.

ARCH 2340. Architecture, Modernity, and the City, 1910 to 1980. 4 Hours.
Examines the forms and principles of European and American architecture of the twentieth century in the context of society's changing conditions. Major topics include craft vs. industry, avant-garde and "other" modernisms, the architect and critical positions, suburbs, new concepts of space, modernism and its critique, and global extensions of modernism.

ARCH 2341. Recitation for ARCH 2340. 0 Hours.
Offers a small-group discussion format to cover material in ARCH 2340.
ARCH 3352. Architecture Topics Abroad: Drawing. 4 Hours.
Examines and engages historic architecture and urbanism through freehand drawing. Offers students an opportunity to learn how to draw in freehand like an architect—drawing in a creative, interpretive, precise, and analytical manner—as well as to learn about the history and cultural context of the great architectural monuments and urban spaces that they are analyzing and drawing, including major architectural monuments. Studies new skills of drawing, the conventions of architectural representation, and the cultural history of the built environment. May be repeated without limit.

ARCH 3361. Architecture and Urbanism Abroad. 4 Hours.
Covers the detailed history of architecture and urban development in the host city, from its founding to the present. Offered only abroad.

ARCH 3362. Seminar Abroad. 4 Hours.
Offers students an opportunity to learn and discuss historical and contemporary European theory and criticism, from Vitruvius and Alberti to contemporary figures. Raises and addresses architectural questions of composition, society, politics, and environment. Offered only abroad.

ARCH 3364. Architecture and Planning in 21st-Century China. 4 Hours.
Offers real-world insight into the fastest-growing urbanization process in the world. Offers students an opportunity to learn about the physical history of Chinese cities, especially Shanghai, Beijing, and Hangzhou. Explores the differences in scale of both contemporary and historic urban fabric, building types, and development types. Students are encouraged to produce case studies comparing and contrasting these elements. May be repeated up to three times.

ARCH 3370. Topics in Architectural History. 4 Hours.
Covers a variety of topics in architectural history and theory with the aim of offering students a greater degree of choice in shaping their curriculum and the opportunity to study subjects that interest them in greater detail. Course topics encompass a wide range of themes and complements the mission of the department, the college, and the university. Taught by a number of different faculty members according to their interests and expertise.

ARCH 3450. Advanced Architectural Communication. 4 Hours.
Builds on CAD (computer-aided design) skills to develop ability to model in three dimensions and develop surfaces and lighting. Also addresses strategies in design communication for effective presentation of digital material.

ARCH 3990. Elective. 1-4 Hours.
Offers elective credit for courses taken at consortium institutions. May be repeated without limit.

ARCH 4850. Urban and Architectural History Abroad. 4 Hours.
Offers an on-site study of architecture and urban history conducted abroad. Instructors accompany students to visit and lecture about the most significant sites in the history of architecture, art, and urban development of a specific country. In comparison to a traditional on-campus course, the number of examples covered is smaller; however, each example is discussed in much greater detail. Encourages students to discover problems and aspects in art, architecture, and urbanism that have not been raised before, something only possible through direct survey and observation. Offers students an opportunity to obtain a real sense of architectural research without neglecting the basics of the field. Interactions with practicing architects, city planners, policymakers, preservationists, museum professionals, and artists are integral parts of this course. May be repeated without limit.

ARCH 4970. Junior/Senior Honors Project 1. 4 Hours.
Focuses on in-depth project in which a student conducts research or produces a product related to the student’s major field. Combined with Junior/Senior Project 2 or college-defined equivalent for 8 credit honors project. May be repeated without limit.

ARCH 4971. Junior/Senior Honors Project 2. 4 Hours.
Focuses on second semester of in-depth project in which a student conducts research or produces a product related to the student’s major field. May be repeated without limit.

ARCH 4990. Elective. 1-4 Hours.
Offers elective credit for courses taken at consortium institutions. May be repeated without limit.

ARCH 4991. Research. 4 Hours.
Offers an opportunity to conduct research under faculty supervision.

ARCH 4992. Directed Study. 1-4 Hours.
Offers independent work under the direction of members of the department on a chosen topic. Course content depends on instructor. May be repeated without limit.

ARCH 4993. Independent Study. 1-4 Hours.
Offers independent work under the direction of members of the department on a chosen topic. Course content depends on instructor. May be repeated without limit.

ARCH 4994. Internship. 4 Hours.
Offers students an opportunity for internship work. May be repeated without limit.

ARCH 4996. Experiential Education Directed Study. 4 Hours.
Draws upon the student’s approved experiential activity and integrates it with study in the academic major. Restricted to those students who are using the course to fulfill their experiential education requirement. May be repeated without limit.

ARCH 5100. Housing and Aggregation. 6 Hours.
Provides an understanding of multiunit housing in the United States and Europe. Working in teams, students develop new patterns of housing for Boston-area sites and develop those sites with their own individual interventions.

ARCH 5115. Option Studio. 6 Hours.
Offers an upper-level design studio that covers new studio topics, content, and studio instructors each semester. The studio instructors offer topical content that best aligns with their research and practice expertise, which provides students with the latest concepts in architectural design, theory, and research on a consistently updated and rotating basis. Students select their top choices of studio topics and instructors, giving them more flexibility in the areas for which they would like to focus their education.

ARCH 5120. Comprehensive Design Studio. 6 Hours.
Focuses on the materials and making of architecture. Considers architectural connections at all scales, from the nut and bolt to the scale of a door or window to the scale of the whole building and the city. Grounds design proposals upon a tectonic strategy, unlike traditional design studios that produce a schematic design before considering constructional ideas.

ARCH 5210. Environmental Systems. 4 Hours.
Explores the ways in which architectural form can create particular conditions of light and shadow; provide shelter from heat, cold, and rain; and incorporate systems that provide for water, electricity, and sanitation. Provides a series of simple and straightforward small-scale design projects.

ARCH 5211. Recitation for ARCH 5210. 0 Hours.
Offers a small-group discussion format to cover material in ARCH 5210.
ARCH 5220. Integrated Building Systems. 4 Hours.
Studies how to integrate into students’ building designs all the environmental and tectonic systems that they have covered in previous architecture courses.

ARCH 5230. Structural Systems. 4 Hours.
Introduces the fundamental concepts of structural analysis and design for architecture. Examines the nature of forces and their effects on different types of structural elements; the structural properties of shapes and materials; and the selection, analysis, and design of efficient structural systems that resist the loads acting upon them. Uses historical and contemporary examples to illustrate how the changing context of architectural ideas drives structural form and the selection of structural systems. Includes field trips and student presentations of structural models and diagrams. Restricted to students in the architecture BS program and to students in the three-year MArch program.

ARCH 5231. Recitation for ARCH 5230. 0 Hours.
Provides a small-group discussion format to cover examples from the material in ARCH 5230.

ARCH 5310. Design Tactics and Operations. 4 Hours.
Encourages students to develop the connections between critical attitudes and techniques in design, through important historical texts. Offers a kind of “great books” approach to the integration of design and history, introducing the writings and seminal designs of Alberti, Palladio, Wright, Le Corbusier, Semper, Sitte, Rowe, Colquhoun, Moneo, Koolhaas, Rossi, Frampton, Venturi and Scott Brown, Scarpa, and Lynch.

ARCH 5320. Applications of Architectural Design Methods. 4 Hours.
Explores the different means through which we analyze, interpret, and ultimately understand the built environment and how, in turn, the built environment contributes to our understanding of the world itself. Offers students an opportunity to learn how to think critically themselves, to learn to ask questions, and to develop their own perspectives on the production of architecture and design. Students who do not meet course prerequisites may seek permission of instructor.

ARCH 5530. Innovative Models in Real Estate Development and Design. 4 Hours.
Addresses advanced topics in real estate development and finance and examines innovative models of practice in real estate development available to design professionals. Studies a set of advanced analytical tools and techniques for evaluating the cash flows and economic returns of real estate investment and development. Introduces advanced methods of financing real estate and the structure of capital markets involved in property assets. Uses the case instruction method and includes active, discussion-oriented learning.

ARCH 5976. Directed Study. 1-4 Hours.
Offers independent work under the direction of members of the department on a chosen topic. Course content depends on instructor. May be repeated without limit.

ARCH 5978. Independent Study. 1-4 Hours.
Offers independent work under the direction of members of the department on a chosen topic. Course content depends on instructor. May be repeated without limit.

ARCH 5984. Research. 1-4 Hours.
Offers an opportunity to conduct research under faculty supervision. May be repeated without limit.

LARC 1330. Designed Ecologies of the City. 4 Hours.
Introduces the emerging field of urban ecology and ecologically inspired urbanism. Offers students an opportunity to develop contemporary insights about resilient urban form and speculative frameworks, ecological patterns and processes, urban ecosystems, and methods of urban habitat analysis. Covers urban hydrology, geomorphology, and soils; urban regions and ecoregions; urban effects on climate; ecosystem services; landscape ecology and infrastructural adaptation; postindustrial landscapes; and the theory of landscape and ecological urbanism. Other lecture topics address urban waterfront resilience, sea-level rise, waste, contamination, remediation, and ecological disturbance and succession.

LARC 1990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

LARC 2130. Sustainable Urban Site Design. 6 Hours.
Focuses on site planning and design with an emphasis on parks and open-space systems in the adaptive reuse of urban sites. Projects focus on the creation and cultivation of public space, transformation of site conditions, and development of sustainable site materials. Emphasizes site analysis, development of an individual design process, and design communication strategies. This studio course introduces students to urban design precedents, site research, and remediation methods through case studies, lectures, site visits, and workshops.

LARC 2140. Designed Urban Ecologies. 6 Hours.
Continues LARC 2130. Focuses on sustainable community/campus/neighborhood design at the intersection of large-scale urban and environmental systems. Primary topics include mixed-use programming in relation to systems ranging from zoning and transit to the material flows of human and wildlife habitats. This studio course introduces basic geographical information systems (GIS) and application of landscape ecology principles. Projects examine the role of landscape systems and the formation and reformulation of land development scenarios.

LARC 2230. Site Materials and Methods. 4 Hours.
Introduces fundamental techniques of sustainable site engineering in the urban realm, including earthworks, water, and vegetal systems. Primary topics include grading, storm water management, urban plants, and basic site elements such as retaining walls, paving systems, and landscape on structure.

LARC 2240. Sustainable Site Construction and Detailing. 4 Hours.
Continues LARC 2230. Focuses on construction technologies, methods, and materials for sustainable site elements, including environmental performance infrastructures, circulation systems, and basic site structures. Introduces structural systems for site work via lecture and in-class exercises.

LARC 2330. Cities, Landscape, and Modern Culture. 4 Hours.
Presents the themes, core theories, and iconic works that gave shape to modernism in landscape architecture and urbanism. Focusing on the eighteenth-century through mid-twentieth-century projects and designers, lectures examine contextual factors and resulting formal, spatial, organizational, and material characteristics of built works. Offers students an opportunity to practice formulation of a critical design perspective via reading responses, project analysis, written work, and exams.
LARC 2340. Cities, Landscape, and Contemporary Culture. 4 Hours. 
Introduces fundamental-to-advanced concepts in the field of landscape and urban ecology. Focuses on the landscape-scale spatial structure, temporal patterns, and geographic ranges produced by the intersection of large-scale environmental and human processes. Emphasizes spatial taxonomies (patch, corridor, mosaic, granularity, edge, ecotone) produced across diverse landscape types influenced by human development and landscape dynamics in the built environment (disturbance, fragmentation, accumulation, and succession). Incorporates basic techniques in geographic-information-system software.

LARC 5220. Sustainable Landscape Practices. 4 Hours. 
Offers a lecture/workshop/field-based course that builds upon landscape technology skills introduced in LARC 2230 and LARC 2240, with a focus on ecotechnologies operating in the built environment. Core topics include design and implementation metrics, material life-cycle management, funding models, and aesthetic and cultural aspects. Potential topics include green roofs, green walls, bioswales, pervious pavements, constructed wetlands, “complete street” elements, geosensor networks, alternative waste management, water detention and energy generation methods, and living infrastructures for coastal environments.

LARC 2430. Plant Identification. 4 Hours. 
Focuses on identification of structural, growth, and community characteristics of woody plant materials. Presents plant materials as design elements with diverse cultural uses as well as ecological agents of environmental change. Combines lectures with field visits.

LARC 2440. Planting Design. 4 Hours. 
Combines horticultural and ecological field study with studio design exercises to deliver introductory to advanced planting design techniques. Primary topics include how to design phytoremediation strategies for contaminated sites, seasonal planting considerations, strategic phasing, and maintenance techniques. This is a workshop-based course.

LARC 2990. Elective. 1-4 Hours. 
Offers elective credit for courses taken at consortium institutions. May be repeated without limit.

LARC 3155. Studio Abroad. 6 Hours. 
Offers students an opportunity to learn sustainable landscape and urban design techniques in an international setting. Key topics include cultural influences on urban revitalization and ecological restoration, innovative material and site technologies, regional best management practices (BMPs), and integration of diverse historical influences into the design process.

LARC 3170. Landscape Planning and Urbanism Studio. 6 Hours. 
Introduces sustainable landscape planning techniques with an emphasis on adaptive urbanism. Key topics include the designed and managed relationship of cities to their regional ecologies, such as sub/urbanized watersheds and coastal zones, as well as the spatial, material, and programmatic roles of environmental infrastructures in the civic landscape. Particularly emphasizes the market-based integration of recreation, transit, food, housing, and industrial networks with living systems such as urban forests, riparian corridors, managed habitats, and constructed wetlands.

LARC 3990. Elective. 1-4 Hours. 
Offers elective credit for courses taken at consortium institutions. May be repeated without limit.

LARC 4970. Junior/Senior Honors Project 1. 4 Hours. 
Offers students an opportunity to develop research toward an in-depth project related to the student’s major. Can be combined with Junior/Senior Honors Project 2 or a college-defined equivalent for an 8-credit honors project.

LARC 4971. Junior/Senior Honors Project 2. 4 Hours. 
Offers students an opportunity to complete a research or design project related to the student’s major.

LARC 4992. Directed Study. 1-4 Hours. 
Offers independent work under the direction of members of the department on a chosen topic. Course content depends on instructor. May be repeated without limit.
LARC 5310. Urban Landscape Seminar. 4 Hours.
Offers a discussion-based seminar focusing on case studies of influential works in contemporary landscape, urbanism, and sustainable environmental design. Encourages students to seek interdisciplinary perspectives toward development of critical-thinking skills in relation to forces shaping urban environments in contemporary global culture. A diverse range of material from published design criticism to open-source social media engagement provides basis for discussion and written and oral presentations.

LARC 5420. Professional Practice in Landscape Architecture. 4 Hours.
Offers a lecture- and case-study-based course focusing on strategic planning, business models, organizational structures, logistics, and regulatory paradigms associated with professional practice in landscape architecture. Core topics provide an overview of common technical and business procedures, including RFQs; RFPs; marketing, public relations, and client management; hiring and human resource management; review board/regulatory boards; permitting; and licensure.

Landscape Architecture Courses

LARC 1330. Designed Ecologies of the City. 4 Hours.
Introduces the emerging field of urban ecology and ecologically inspired urbanism. Offers students an opportunity to develop contemporary insights about resilient urban form and speculative frameworks, ecological patterns and processes, urban ecosystems, and methods of urban habitat analysis. Covers urban hydrology, geomorphology, and soils; urban regions and ecoregions; urban effects on climate; ecosystem services; landscape ecology and infrastructural adaptation; postindustrial landscapes; and the theory of landscape and ecological urbanism. Other lecture topics address urban waterfront resilience, sea-level rise, waste, contamination, remediation, and ecological disturbance and succession.

LARC 1990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

LARC 2130. Sustainable Urban Site Design. 6 Hours.
Focuses on site planning and design with an emphasis on parks and open-space systems in the adaptive reuse of urban sites. Projects focus on the creation and cultivation of public space, transformation of site conditions, and development of sustainable site materials. Emphasizes site analysis, development of an individual design process, and design communication strategies. This studio course introduces students to urban design precedents, site research, and remediation methods through case studies, lectures, site visits, and workshops.

LARC 2140. Designed Urban Ecologies. 6 Hours.
Continues LARC 2130. Focuses on sustainable community/campus/neighborhood design at the intersection of large-scale urban and environmental systems. Primary topics include mixed-use programming in relation to systems ranging from zoning and transit to the material flows of human and wildlife habitats. This studio course introduces basic geographical information systems (GIS) and application of landscape ecology principles. Projects examine the role of landscape systems and the formation and reformulation of land development scenarios.

LARC 2230. Site Materials and Methods. 4 Hours.
Introduces fundamental techniques of sustainable site engineering in the urban realm, including earthworks, water, and vegetal systems. Primary topics include grading, storm water management, urban plants, and basic site elements such as retaining walls, paving systems, and landscape on structure.

LARC 2240. Sustainable Site Construction and Detailing. 4 Hours.
Continues LARC 2230. Focuses on construction technologies, methods, and materials for sustainable site elements, including environmental performance infrastructures, circulation systems, and basic site structures. Introduces structural systems for site work via lecture and in-class exercises.

LARC 2330. Cities, Landscape, and Modern Culture. 4 Hours.
Presents the themes, core theories, and iconic works that gave shape to modernism in landscape architecture and urbanism. Focusing on the eighteenth-century through mid-twentieth-century projects and designers, lectures examine contextual factors and resulting formal, spatial, organizational, and material characteristics of built works. Offers students an opportunity to practice formulation of a critical design perspective via reading responses, project analysis, written work, and exams.

LARC 2340. Cities, Landscape, and Contemporary Culture. 4 Hours.
Presents the themes, core theories, and iconic works that shape the field of contemporary landscape architecture and urbanism. Focusing on the late twentieth century through contemporary projects and designers, lectures examine contextual factors and resulting formal, spatial, organizational, and material characteristics of built works. Offers students an opportunity to practice formulation of a critical design perspective via reading responses, project analysis, written work, and exams.

LARC 2430. Plant Identification. 4 Hours.
Focuses on identification of structural, growth, and community characteristics of woody plant materials. Presents plant materials as design elements with diverse cultural uses as well as ecological agents of environmental change. Combines lectures with field visits.

LARC 2440. Planting Design. 4 Hours.
Combines horticultural and ecological field study with studio design exercises to deliver introductory to advanced planting design techniques. Primary topics include how to design phyto-remediation strategies for contaminated sites, seasonal planting considerations, strategic phasing, and maintenance techniques. This is a workshop-based course.

LARC 2990. Elective. 1-4 Hours.
Offers elective credit for courses taken at consortium institutions. May be repeated without limit.

LARC 3155. Studio Abroad. 6 Hours.
Offers students an opportunity to learn sustainable landscape and urban design techniques in an international setting. Key topics include cultural influences on urban revitalization and ecological restoration, innovative material and site technologies, regional best management practices (BMPs), and integration of diverse historical influences into the design process.

LARC 3170. Landscape Planning and Urbanism Studio. 6 Hours.
Introduces sustainable landscape planning techniques with an emphasis on adaptive urbanism. Key topics include the designed and managed relationship of cities to their regional ecologies, such as sub/urbanized watersheds and coastal zones, as well as the spatial, material, and programmatic roles of environmental infrastructures in the civic landscape. Particularly emphasizes the market-based integration of recreation, transit, food, housing, and industrial networks with living systems such as urban forests, riparian corridors, managed habitats, and constructed wetlands.

LARC 3990. Elective. 1-4 Hours.
Offers elective credit for courses taken at consortium institutions. May be repeated without limit.
LARC 4970. Junior/Senior Honors Project 1. 4 Hours.
Offers students an opportunity to develop research toward an in-depth project related to the student's major. Can be combined with Junior/Senior Honors Project 2 or a college-defined equivalent for an 8-credit honors project.

LARC 4971. Junior/Senior Honors Project 2. 4 Hours.
Offers students an opportunity to complete a research or design project related to the student's major.

LARC 4992. Directed Study. 1-4 Hours.
Offers independent work under the direction of members of the department on a chosen topic. Course content depends on instructor. May be repeated without limit.

LARC 4993. Independent Study. 1-4 Hours.
Offers students an opportunity for independent work under the direction of members of the department. Course content determined by instructor in relation to student's course of study. May be repeated up to 15 times for up to 16 total credits.

LARC 4994. Internship. 4 Hours.
Offers students an opportunity for internship work. May be repeated up to three times.

LARC 4996. Experiential Education Directed Study. 4 Hours.
Offers students an opportunity to integrate directed study work overseen by department faculty with approved experiential experience(s). Restricted to students using the course to fulfill the experiential education requirement. May be repeated up to three times.

LARC 5110. Advanced Design for Urban Environments Studio. 6 Hours.
Focuses on ecological, economic, and social resiliency of designed urban environments in response to globalization. Contemporary case studies of urban change provide the basis for design investigation into issues such as the impact of shifting industries on Detroit (deurbanization) or Shenzhen (rapid densification); shifting weather and water patterns in densely populated regions; societal shifts, from generational demographics to political upheavals and militarization/demilitarization of the urban landscape. Emphasizes the integration of interdisciplinary perspectives and advanced design analysis, conceptualization, and visualization skills into development of a global perspective on managing change in the built environment.

LARC 5120. Comprehensive Design Studio. 6 Hours.
Offers students an opportunity to design and develop a site or district including all of its requisite systems. Students draw on their landscape architectural education to produce a design both responsive to specific criteria and prototypical of ways to build sustainable and adaptable public landscapes—often described as "resilience." Projects are expected to respond to and integrate their contexts (urban, environmental, climatic, and economic); meet spatial, performative, and programmatic requirements and technical demands (materials, implementation and management strategies); and dynamic processes at play within and around the project site.

LARC 5210. Landscape Ecology. 4 Hours.
Introduces fundamental-to-advanced concepts in the field of landscape and urban ecology. Focuses on the landscape-scale spatial structure, temporal patterns, and geographic ranges produced by the intersection of large-scale environmental and human processes. Emphasizes spatial taxonomies (patch, corridor, mosaic, granularity, edge, ecotone) produced across diverse landscape types influenced by human development and landscape dynamics in the built environment (disturbance, fragmentation, accumulation, and succession). Incorporates basic techniques in geographic-information-system software.

LARC 5220. Sustainable Landscape Practices. 4 Hours.
Offers a lecture/workshop/field-based course that builds upon landscape technology skills introduced in LARC 2230 and LARC 2240, with a focus on ecotechnologies operating in the built environment. Core topics include design and implementation metrics, material life-cycle management, funding models, and aesthetic and cultural aspects. Potential topics include green roofs, green walls, bioswales, pervious pavements, constructed wetlands, "complete street" elements, geosensor networks, alternative waste management, water detention and energy generation methods, and living infrastructures for coastal environments.

LARC 5310. Urban Landscape Seminar. 4 Hours.
Offers a discussion-based seminar focusing on case studies of influential works in contemporary landscape, urbanism, and sustainable environmental design. Encourages students to seek interdisciplinary perspectives toward development of critical-thinking skills in relation to forces shaping urban environments in contemporary global culture. A diverse range of material from published design criticism to open-source social media engagement provides basis for discussion and written and oral presentations.

LARC 5420. Professional Practice in Landscape Architecture. 4 Hours.
Offers a lecture- and case-study-based course focusing on strategic planning, business models, organizational structures, logistics, and regulatory paradigms associated with professional practice in landscape architecture. Core topics provide an overview of common technical and business procedures, including RFQs; RFPs; marketing, public relations, and client management; hiring and human resource management; review board/regulatory boards; permitting; and licensure.