

# LANDSCAPE ARCHITECTURE (LA)

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**Courses primarily for undergraduates:**

## **LA 1710: City Play!**

Credits: 3. Contact Hours: Lecture 3.

Exploration of play in cities. Introduction to two important concepts: how play has become a central theme in the economic development and sustainability of cities around the world; and, how the design of cities needs to make room for equitable access to play for everyone.

## **LA 2010: Studio: Landscape Interpretation and Representation**

Credits: 6. Contact Hours: Studio 12.

*Prereq: Landscape Architecture professional program*

Reading and representing varied landscapes; development of aesthetic sensitivity to the geomorphology, vegetation, and cultural influences on these landscapes. Small-scale interventions and exploration of landscape phenomena and change. Emphasis on a variety of documentation and drawing techniques. (Typically Offered: Fall)

## **LA 2020: Studio: Site Design I**

Credits: 6. Contact Hours: Studio 12.

*Prereq: LA 2010*

Fundamental issues of landscape planning and design at a site scale. Projects introduce a variety of (objective and subjective) site inquiry methods, space and place making, and sensitive integration of architecture and landscape for specific land uses. User needs, precedent study, programming, site engineering, planting design, and outdoor space design expressed through a variety of three-dimensional modeling, graphic, and written media. (Typically Offered: Spring)

## **LA 2110: Digital Design Methods for Landscape Architecture**

(Cross-listed with CRP 2110).

Credits: 3. Contact Hours: Lecture 3.

Foundational knowledge and basic skills in 2D, 3D, and 4D computer applications used for design development and communication, with emphasis on 3D modeling and workflow interoperability. (Typically Offered: Spring)

## **LA 2210: Native Plants of the Savanna Ecotone**

Credits: 3. Contact Hours: Lecture 2, Laboratory 3.

*Prereq: Landscape Architecture professional program*

Observation and study of the wetland, prairie, and woodland vegetation native to the savanna ecotone. Emphasis on plant communities, their distribution, structure, habitat and aesthetics. Plant identification and use in landscape design. Precedent and case studies of vegetation preservation, restoration and use in built works. (Typically Offered: Fall)

## **LA 2220: Introduced Plants of the Midwest**

Credits: 3. Contact Hours: Lecture 2, Studio 3.

*Prereq: LA 2210*

Identification, observation, and study of plants introduced to cultivation in the Midwest region. Plant cultural requirements, including adaptations to climate changes, solar exposure, and soil conditions. Investigation of history of plant introduction and use in designed landscape, including consequent impacts of plant introduction such as plant invasion. Introduction to planting design at the site scale, including matching plant cultural requirements to site conditions, functional uses of plants and expressive composition using plant form, texture and color. (Typically Offered: Spring)

## **LA 2410: Developing Identity as a Landscape Architect**

Credits: 1. Contact Hours: Lecture 1.

*Prereq: Landscape Architecture professional program*

Development of life skills for conflict resolution, effective interpersonal communication, and CPR/First Aid. Examination of personal values as they relate to the backgrounds, abilities, attitudes, and values of others; exploration of how these influence personal decision-making and group interaction. Reading, discussion, class activities, journal-keeping, writing. Offered on a satisfactory-fail basis only. (Typically Offered: Fall)

## **LA 2700: Foundations in Natural Resource Policy and History**

(Cross-listed with ENVS 2700/ NREM 2700).

Credits: 3. Contact Hours: Lecture 3.

The development of natural resource conservation philosophy and policy from the Colonial Era to the present. North American wildlife, forestry, and environmental policy; national parks and other protected lands; federal and state agencies. Relationship to cultural contexts, including urban reform and American planning movement. Discussion of common pool resources, public and private lands. (Typically Offered: Fall)

## **LA 2720: Landscape Studies**

Credits: 3. Contact Hours: Lecture 3.

*Prereq: Landscape Architecture professional program*

Exploration of landscapes, from broad settlement patterns to individual sites. Investigation of relationships between vernacular and designed landscapes. Landscapes considered as modes of cultural production that shape and are shaped by social, political, and economic processes. Lectures, reading, field studies, and writing. Meets U.S. Diversity Requirement. (Typically Offered: Fall)

**LA 2740: The Social and Behavioral Landscape**

Credits: 3. Contact Hours: Lecture 3.

Exploration of social and behavioral factors pertinent to design of the domestic, civic, and commercial landscape. Focus on working familiarity with design principles as they relate to the behavior and activities of people across a broad demographic and cultural spectrum; application of these principles to design of outdoor environments. Lectures and discussions, including group exercises and field trips. Meets U.S. Diversity Requirement. (Typically Offered: Spring)

**LA 2810: Investigating Landscape Form, Process, and Detail**

Credits: 3. Contact Hours: Lecture 1, Laboratory 6.

*Prereq: Landscape Architecture professional program*

Exploration of the poetics and principles of landscape construction. Investigation and interpretation of landform and geomorphic processes such as the hydrologic cycle, erosion, and sedimentation. Close observation and representation of detail design, with an emphasis on material types, their connections, and weathering. Readings, field studies, and drawings in analog and digital media. (Typically Offered: Fall)

**LA 2820: Landscape Dynamics**

Credits: 3. Contact Hours: Lecture 2, Laboratory 2.

*Prereq: Sophomore classification*

Understand design implications presented by geotechnical and ecological processes in the landscape including ecology, vegetation, soils and water. Understand the influence of landforms, geology, plants, soils, and water on the creation of landscape designs. Course relates current issues including water quality impairment, erosion, and invasive species with design strategies such as stormwater management, soil quality management, and plant community restoration. Field trips. (Typically Offered: Spring)

**LA 3010: Site Design II**

Credits: 6. Contact Hours: Studio 12.

*Prereq: LA 2020*

Development of half-acre to hundred-acre landscape design and planning proposals, potentially in collaboration with students in other programs. Apply critical methodological frameworks to shape site systems while providing appropriate support for diverse user groups and creating culturally meaningful places. Assess and interpret a program of use, organize subjective and objective site inventory and analysis, develop functional and poetic design strategies for infrastructure and natural systems, and craft artistic and functionally explicit landscape architectural proposals. Development of appropriate technique and high level of craft in representations to support design thinking process and final scheme presentation. (Typically Offered: Fall)

**LA 3020: Ecological Design**

Credits: 6. Contact Hours: Studio 12.

*Prereq: LA 2820, LA 3010, LA 3810 and NREM 1200*

Exploration and application of ecological theories and processes in design and planning to include hundred plus-acre scale in urban, urban fringe, and rural landscapes. Apply advanced landscape analysis of soil, water, topography, and vegetation utilizing geographic information systems with an emphasis on inventory and analysis mapping. (Typically Offered: Spring)

**LA 3090: Field Travel**

Credits: 1-2. Repeatable, maximum of 2 times.

*Prereq: Landscape Architecture professional program*

Observation of and reflection on professional practice and landscapes in urban, rural, and wilderness areas. Offered on a satisfactory-fail basis only. (Typically Offered: Fall, Spring, Summer)

**LA 3220: Fundamentals of Planting Design**

Credits: 3.

*Prereq: LA 2020*

The art and techniques of creating plant compositions in the landscape that respond to cultural and biophysical contexts. Investigation of soil properties and plant/soil relationships relevant to the built environment. Methods of site inventory and analysis, developing plant palettes and composing plant assemblages that address expressive and functional needs. Introduction to the techniques of preparing planting plans, including standards for plant selection, plant lists and plant specification.

**LA 3410: Contemporary Landscape Architecture**

Credits: 1. Contact Hours: Lecture 1.

*Prereq: LA 3010, LA 3810 and NREM 1200*

Exploration of contemporary landscape architectural practice through individualized research into practicing firms. Preparation of paper and presentation outlining broad framework and specific parameters of a selected area of contemporary practice using specific projects as examples. Work may result in invitation of current practitioner(s) as a lecture series or event. Resume and portfolio preparation in advance of required off-campus semester (LA 4440 A, B or C). (Typically Offered: Spring)

**LA 3710: History of Modern Landscapes, 1750 to Present**

Credits: 3. Contact Hours: Lecture 3.

Investigation of landscape design concepts and trends as observed over time, from approximately 1750 to the present, with emphasis on the United States and Europe. Examination of significant figures and outstanding works (sites, gardens, landscapes, monuments, subdivisions, city plans, etc.) of varied geographic regions. Analysis of the social, economic, political, and technical forces contributing to the development of landscape design styles, vocabulary, and literature. Lectures, readings, projects, research papers. (Typically Offered: Spring)

**LA 3730: Gardens and Landscapes from Antiquity to 1750**

Credits: 3. Contact Hours: Lecture 3.

Investigation of international landscape design concepts and trends as observed over time, from pre-history to the mid 18th century. Examination of significant figures and outstanding works (sites, gardens, landscapes, monuments, subdivisions, city plans, etc.) of varied geographic regions. Analysis of the social, economic, political, and technical forces contributing to the development of landscape design styles, vocabulary, and literature. Lectures, readings, projects, research papers. Meets International Perspectives Requirement. (Typically Offered: Fall)

**LA 3810: Shaping the Land**

Credits: 3.

Design of landforms to achieve aesthetic, functional, and safety goals. Landform changes to accommodate human uses and activities. Impacts and implications of landform transformation on the surrounding environment. Surface and subsurface drainage design, storm water runoff best management practices, contour manipulation to incorporate slopes, swales, culverts, pads, retaining walls, walks, steps, terraces, buildings, and other structures in the landscape. Road layout and alignment, parking lot design, and earthwork volume estimates. Design communication using CAD, perspectives, cross-sections, contour maps, landform models, and narratives. Class exercises, case study precedents, and preliminary construction documents. (Typically Offered: Fall)

**LA 4010: Community Design**

Credits: 6. Contact Hours: Studio 12.

*Prereq:* LA 4020

Physical planning and design of places utilizing community-based methods. Projects address social and cultural dimensions of placemaking such as reuse of abandoned sites, in-fill development, and community visioning. Emphasis on development of user-client relationship skills and design research. Integrated seminar component. (Typically Offered: Fall)

**LA 4010H: Community Design: Honors**

Credits: 7. Contact Hours: Studio 12.

*Prereq:* LA 4020

Physical planning and design of places utilizing community-based methods. Projects address social and cultural dimensions of placemaking such as reuse of abandoned sites, in-fill development, and community visioning. Emphasis on development of user-client relationship skills and design research. Integrated seminar component. (Typically Offered: Fall)

**LA 4020: Urban Design**

Credits: 6. Contact Hours: Studio 12.

*Prereq:* LA 3020

Comprehensive planning and design for urban sites or for sites within urban contexts. Projects typically include planning for a variety of integrated land uses, and cover the full range of design scales from master planning to proposals for site details. Emphasis on written and verbal as well as graphic communications. Integrated seminar component. (Typically Offered: Fall)

**LA 4020H: Urban Design: Honors**

Credits: 7. Contact Hours: Studio 12.

Repeatable.

*Prereq:* LA 3020

Comprehensive planning and design for urban sites or for sites within urban contexts. Projects typically include planning for a variety of integrated land uses, and cover the full range of design scales from master planning to proposals for site details. Emphasis on written and verbal as well as graphic communications. Integrated seminar component. (Typically Offered: Fall)

**LA 4030H: Senior Thesis Preparation Tutorial**

Credits: 2.

*Prereq:* LA 4020 or LA 4020H; permission of thesis advisor; enrollment in Honors Program

Preparation for senior thesis. (Typically Offered: Fall)

**LA 4040: Advanced Landscape Architectural Design**

Credits: 6. Contact Hours: Studio 12.

Repeatable, maximum of 2 times.

*Prereq:* LA 4020

Advanced forum for the demonstration of sophistication in landscape architectural design. Experimentation and innovation are encouraged. (Typically Offered: Fall)

**LA 4040H: Advanced Landscape Architectural Design: Honors**

Credits: 6-7. Contact Hours: Studio 12.

Repeatable, maximum of 2 times.

*Prereq:* LA 4020

Advanced forum for the demonstration of sophistication in landscape architectural design. Experimentation and innovation are encouraged. (Typically Offered: Fall)

**LA 4050H: Senior Thesis**

Credits: 6. Contact Hours: Studio 15.

*Prereq:* LA 4010; LA 4020; LA 4030; Department Permission; Enrollment in Honors Program

Individual advanced forum for the demonstration of sophistication in landscape architectural design. Experimentation and innovation are expected.

**LA 4420: Professional Practice**

(Dual-listed with LA 5420).

Credits: 2. Contact Hours: Lecture 2.

*Prereq:* LA 4810

Studies of conventional and developing forms of public and private practice. Explore relationships between professional life and the culture of the professional design firm; investigate firm identities and structures; understand design projects, their delivery process, and contractual agreements. Lecture and class discussion. (Typically Offered: Spring)

**LA 4440A: Landscape Architecture Independent Educational Enrichment: Professional Internship**

Credits: Required. Repeatable, maximum of 3 times.

*Prereq:* LA 3410 or *Permission of Advisor and Chair*

Independent educational enrichment through exploration of landscape architectural practice in a professional internship, international studies, or out-of-region national study experience. (Typically Offered: Fall, Spring, Summer)

**LA 4440B: Landscape Architecture Independent Educational Enrichment: Study Abroad**

Credits: Required. Repeatable, maximum of 3 times.

*Prereq:* LA 3410 or *Permission of Advisor and Chair*

Independent educational enrichment through exploration of landscape architectural practice in a professional internship, international studies, or out-of-region national study experience. (Typically Offered: Fall, Spring, Summer)

**LA 4440C: Landscape Architecture Independent Educational Enrichment: National Student Exchange**

Credits: Required. Repeatable, maximum of 0 credits.

*Prereq:* LA 3410 or *Permission of Advisor and Chair*

Independent educational enrichment through exploration of landscape architectural practice in a professional internship, international studies, or out-of-region national study experience. (Typically Offered: Fall, Spring, Summer)

**LA 4540: Fundamentals of Remote Sensing and Spatial Analysis**

(Dual-listed with CRP 5540/ LA 5540). (Cross-listed with CRP 4540).

Credits: 3. Contact Hours: Lecture 3.

*Prereq:* CRP 3510

Introduction to image processing techniques needed for analysis of optical remote sensing imagery, including filtering, enhancement, and classification. Analysis of elevation surfaces, hydrology, distance, overlays and visual programming with Model Builder. Practical applications in a variety of topics to understand how to analyze imagery. (Typically Offered: Spring)

**LA 4590: Digital Design Methods for Landscape Architecture**

(Dual-listed with LA 5590).

Credits: 3. Contact Hours: Lecture 3.

Introduction to digital tools used by landscape architects for design communication, visualization, and design development, with emphasis on 3D modeling and workflow interoperability. (Typically Offered: Spring)

**LA 4780A: Topical Studies in Landscape Architecture: Landscape Design**

(Dual-listed with LA 5780A).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR *Senior or Graduate classification*

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780B: Topical Studies in Landscape Architecture: Planting Design**

(Dual-listed with LA 5780B).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR *Senior or Graduate classification*

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780C: Topical Studies in Landscape Architecture: Construction**

(Dual-listed with LA 5780C).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR *Senior or Graduate classification*

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780D: Topical Studies in Landscape Architecture: History/Theory/ Criticism**

(Dual-listed with LA 5780D).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR *Senior or Graduate classification*

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780E: Topical Studies in Landscape Architecture: Landscape Planning**

(Dual-listed with LA 5780E).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 credits.

*Prereq:* LA 2020 OR *Senior or Graduate classification*

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780F: Topical Studies in Landscape Architecture: Urban Design**

(Dual-listed with LA 5780F).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR Senior or Graduate classification

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780G: Topical Studies in Landscape Architecture: Graphics**

(Dual-listed with LA 5780G).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR Senior or Graduate classification

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780H: Topical Studies in Landscape Architecture: Honors**

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR Senior or Graduate classification

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780I: Topical Studies in Landscape Architecture: Interdisciplinary Studies**

(Dual-listed with LA 5780I).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR Senior or Graduate classification

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780J: Topical Studies in Landscape Architecture: International Studies**

(Dual-listed with LA 5780J).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR Senior or Graduate classification

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780K: Landscape Architecture: Computer Applications**

(Dual-listed with LA 5780K).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable.

*Prereq:* LA 2020 OR Senior or Graduate classification

Offerings vary with each term; check with department for available sections. Course contact hours can range from (2-0) to (3-0) depending on number of credits. (Typically Offered: Fall, Spring, Summer)

**LA 4780L: Topical Studies in Landscape Architecture: Ecological Design**

(Dual-listed with LA 5780L).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR Senior or Graduate classification

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780M: Topical Studies in Landscape Architecture: Landscape Architecture: Social/Behavioral**

(Dual-listed with LA 5780M).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR Senior or Graduate classification

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4780N: Topical Studies in Landscape Architecture: Natural Resources**

(Dual-listed with LA 5780N).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

*Prereq:* LA 2020 OR Senior or Graduate classification

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 4810: Landscape Construction**

Credits: 3. Contact Hours: Lecture 3.

*Prereq:* LA 3810

Development of construction details with an emphasis on the aesthetic and functional use of landscape materials. Explore characteristics, applications, systems, and uses of wood, paving, walls, masonry, concrete, and metals in the landscape. Preliminary preparation of construction documents and design documentation software. (Typically Offered: Fall)

**LA 4820: Landscape Construction Documentation**

Credits: 3. Contact Hours: Lecture 3.

*Prereq:* LA 4810

Development of advanced construction documents, including documentation processes, cost estimation, sheet coordination, and specification writing. Emphasis on documentation software as a tool for design communication. (Typically Offered: Spring)

**LA 4900A: Independent Study: Landscape Design**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq:* Department Permission for Course

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900B: Independent Study: Planting Design**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900C: Independent Study: Construction**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900D: Independent Study: History/Theory/Criticism**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900E: Independent Study: Landscape Planning**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900F: Independent Study: Urban Design**

Credits: 1-6. Repeatable, maximum of 6 credits.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900G: Independent Study: Graphics**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900H: Independent Study: Honors**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900I: Independent Study: Interdisciplinary Studies**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900J: Independent Study: International Studies**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900K: Independent Study: Computer Applications**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900L: Independent Study: Ecological Design**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900M: Independent Study: Social/Behavioral**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4900N: Independent Study: Natural Resources**

Credits: 1-6. Repeatable, maximum of 3 times.

*Prereq: Department Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 4910: Environmental Law and Planning**

(Dual-listed with CRP 5910/ LA 5910). (Cross-listed with ENVS 4910/ CRP 4910).

Credits: 3. Contact Hours: Lecture 3.

*Prereq: 6 credits natural sciences or permission of instructor*

Environmental law and policy as applied in planning at the local and state levels. Brownfields, environmental justice, water quality, air quality, wetland and floodplain management, and local government involvement in ecological protection through land use planning and other programs. (Typically Offered: Spring)

**Courses primarily for graduate students, open to qualified undergraduates:**

**LA 5090: Field Travel**

Credits: 1. Repeatable, maximum of 2 times.

Observation of and reflection on professional and academic practice and landscapes. Field study and travel to conferences and educational events. Reading and final report. Offered on a satisfactory-fail basis only.

**LA 5220: Advanced Plant Technology**

Credits: 3. Contact Hours: Lecture 2, Studio 2.

Introduction to the science that supports green technologies. Plant and soil design for performance in the built environment. Design studies and lab explorations will complement readings, lecture and project case study presentations by practitioners. Green streets, green roofs, bio-phyto-remediation and other technologies are introduced. Final project integrates scientific and technical knowledge in a holistic landscape design. (Typically Offered: Fall)

**LA 5410: Design Inquiry**

Credits: 3. Contact Hours: Lecture 3.

Examination of design inquiry and introduction to research methods relevant to design. Consideration of where knowledge comes from, and how different research methods help create knowledge in various contexts. Readings, discussions, and sketch problems. Preparation of a written research proposal. (Typically Offered: Spring)

**LA 5420: Professional Practice**

(Dual-listed with LA 4420).

Credits: 2. Contact Hours: Lecture 2.

Studies of conventional and developing forms of public and private practice. Explore relationships between professional life and the culture of the professional design firm; investigate firm identities and structures; understand design projects, their delivery process, and contractual agreements. Lecture and class discussion. (Typically Offered: Spring)

**LA 5430: Colloquium: Landscape Architecture Research**

Credits: 1. Contact Hours: Lecture 1.

Forum on current research in landscape architecture. Weekly presentation and discussion of scholarship relevant to the field. Offered on a satisfactory-fail basis only. (Typically Offered: Spring)

**LA 5450: Colloquium II: Interdisciplinary Research**

Credits: 1. Contact Hours: Lecture 1.

Repeatable.

*Prereq:* LA 5430 or graduate classification

Student-run graduate forum on current research in landscape architecture and related disciplines. Weekly presentations by invited faculty from the departments across the College of Design, University, and professional guests. Readings, discussions, and writing. Offered on a satisfactory-fail basis only. (Typically Offered: Fall)

**LA 5540: Fundamentals of Remote Sensing and Spatial Analysis**

(Dual-listed with CRP 4540/ LA 4540). (Cross-listed with CRP 5540).

Credits: 3. Contact Hours: Lecture 3.

Introduction to image processing techniques needed for analysis of optical remote sensing imagery, including filtering, enhancement, and classification. Analysis of elevation surfaces, hydrology, distance, overlays and visual programming with Model Builder. Practical applications in a variety of topics to understand how to analyze imagery. (Typically Offered: Spring)

**LA 5570: Landscape Parametrics & Design Coding**

Credits: 3. Contact Hours: Lecture 3.

Introduction to parametric landscape design through computer programming of the landscape palette. Terrain, vegetation, water, weather, and lighting effects are modeled and represented algorithmically in Rhino-Grasshopper. Computational thinking, logic, and interactivity are combined to address core design principles. (Typically Offered: Fall)

**LA 5580: Web Mapping and Spatial Data Visualization**

(Cross-listed with CRP 5580).

Credits: 3. Contact Hours: Lecture 2, Laboratory 2.

Use and development of online mapping tools and coding to support participatory GIS, Volunteered Geographic Information, information sharing, geodesign, and decision-making actions. Geoprocessing, spatial data science, and user interface design. Laboratory emphasis on practical applications and uses of Web GIS.

**LA 5590: Digital Design Methods for Landscape Architecture**

(Dual-listed with LA 4590).

Credits: 3. Contact Hours: Lecture 3.

Introduction to digital tools used by landscape architects for design communication, visualization, and design development, with emphasis on 3D modeling and workflow interoperability. (Typically Offered: Spring)

**LA 5710: Landscape Architectural Theory**

Credits: 3. Contact Hours: Lecture 3.

Examination of the development of landscape architectural ideas in their historical contexts and in relation to social and cultural practices. Emphasis on exposure to key modern and contemporary texts and projects in landscape architecture, architecture, art, and related fields. Readings, discussions, and writings. (Typically Offered: Fall)

**LA 5780A: Topical Studies in Landscape Architecture: Landscape Design**  
(Dual-listed with LA 4780A).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780B: Topical Studies in Landscape Architecture: Planting Design**

(Dual-listed with LA 4780B).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780C: Topical Studies in Landscape Architecture: Construction**

(Dual-listed with LA 4780C).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780D: Topical Studies in Landscape Architecture: History/Theory/Criticism**

(Dual-listed with LA 4780D).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780E: Topical Studies in Landscape Architecture: Landscape Planning**

(Dual-listed with LA 4780E).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780F: Topical Studies in Landscape Architecture: Urban Design**

(Dual-listed with LA 4780F).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780G: Topical Studies in Landscape Architecture: Graphics**

(Dual-listed with LA 4780G).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780I: Topical Studies in Landscape Architecture: Interdisciplinary Studies**

(Dual-listed with LA 4780I).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780J: Topical Studies in Landscape Architecture: International Studies**

(Dual-listed with LA 4780J).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780K: Landscape Architecture: Computer Applications**

(Dual-listed with LA 4780K).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable.

Offerings vary with each term; check with department for available sections. Course contact hours can range from (2-0) to (3-0) depending on number of credits. (Typically Offered: Fall, Spring, Summer)

**LA 5780L: Topical Studies in Landscape Architecture: Ecological Design**

(Dual-listed with LA 4780L).

Credits: 2-3. Contact Hours: Lecture 6.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780M: Topical Studies in Landscape Architecture: Landscape Architecture: Social/Behavioral**

(Dual-listed with LA 4780M).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5780N: Topical Studies in Landscape Architecture: Natural Resources**

(Dual-listed with LA 4780N).

Credits: 2-3. Contact Hours: Lecture 3.

Repeatable, maximum of 3 times.

Offerings vary with each term; check with department for available sections. (Typically Offered: Fall, Spring, Summer)

**LA 5800: Thesis, Creative Component Tutorial**

Credits: 1-4. Repeatable, maximum of 4 credits.

*Prereq: Instructor Permission for Course*

Hands-on participation in a creative or research activity in the student's area of specialization. Development of a detailed prospectus that defines the thesis or creative component. (Typically Offered: Fall, Spring, Summer)

**LA 5830: Landscape TopoGraphics**

Credits: 3. Contact Hours: Lecture 3.

*Prereq: LA 6020*

Design of landforms to achieve aesthetic, functional, and safety goals. Impacts and implications of landform transformation on the surrounding environment. Design communication using CAD, perspectives, cross-sections, contour maps, landform models, and narratives. Class exercises, case study precedents, and preliminary construction documents. (Typically Offered: Fall)

**LA 5870: Landscape Construction**

Credits: 3. Contact Hours: Lecture 1, Studio 4.

*Prereq: LA 5830*

Introduction to construction practices in landscape architecture. Emphasis on the aesthetic and functional components of built environments including materials, assemblies, and techniques. Introduction to the preparation of construction documents and design documentation software. (Typically Offered: Spring)

**LA 5900A: Special Topics: Landscape Design**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900B: Special Topics: Planting Design**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900C: Special Topics: Construction**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900D: Special Topics: History/Theory/Criticism**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900E: Special Topics: Landscape Planning**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900F: Special Topics: Urban Design**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900G: Special Topics: Graphics**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900I: Special Topics: Interdisciplinary Studies**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900J: Special Topics: International Studies**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900K: Special Topics: Computer Applications**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900L: Special Topics: Ecological Design**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900M: Special Topics: Social/Behavioral**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5900N: Special Topics: Natural Resources**

Credits: 1-6. Repeatable, maximum of 2 times.

*Prereq: Instructor Permission for Course*

Investigation of a topic of special interest to the student. (Typically Offered: Fall, Spring, Summer)

**LA 5910: Environmental Law and Planning**

(Dual-listed with CRP 4910/ ENVS 4910/ LA 4910). (Cross-listed with CRP 5910).

Credits: 3. Contact Hours: Lecture 3.

Environmental law and policy as applied in planning at the local and state levels. Brownfields, environmental justice, water quality, air quality, wetland and floodplain management, and local government involvement in ecological protection through land use planning and other programs. (Typically Offered: Spring)

**LA 5940: Environmental Justice in Built Environments**

Credits: 3. Contact Hours: Lecture 3.

Disproportionate environmental exposures threaten sustainable and resilient cities. Focus on cumulative effects of climate change, social exclusion, and physical isolation on vulnerable populations. Empirical research and visual surveys are synthesized into planning and design strategies for human well-being. Mapping in GIS and spatial analysis assess potential urban environmental burdens. (Typically Offered: Spring)

**LA 5990: Creative Component**

Credits: 1-8. Repeatable, maximum of 8 credits.

*Prereq: Instructor Permission for Course*

Comprehensive study and original development of a project selected by the student and approved by the major professor. Completed project must be submitted to and approved by a graduate faculty committee as evidence of mastery of the principles of landscape architecture. (Typically Offered: Fall, Spring, Summer)

**Courses for graduate students:**

**LA 6010: Studio I: Design Representation**

Credits: 6. Contact Hours: Studio 12.

Introduction to the techniques and conventions of landscape architectural design. Emphasis on creative space and place making at the site scale using the landscape palette. Exploration of two- and three-dimensional representation, both digital and analog, as a means of testing design ideas. (Typically Offered: Fall)

**LA 6020: Studio II: Land Form and Plant Scape**

Credits: 6. Contact Hours: Studio 12.

*Prereq: LA 6010*

Landscape design integrating knowledge of land patterns, plant ecosystems, and human processes. Project involve landform and plants at varied scale of design. Emphasis on competencies in design based in natural process, human behavior, and representation. (Typically Offered: Spring)

**LA 6030: Studio III: Performance Landscapes**

Credits: 6. Contact Hours: Studio 12.

*Prereq: LA 6020*

Theory and methods of landscape design at a variety of scales to achieve desired cultural and biophysical impacts. Development and use of performance metrics drawn from design, humanities, and science. Construction of integrated rhetorical structures of representation and analysis and critical viewpoints to create rigorous design 'arguments' and meaningful, just and vibrant environments. (Typically Offered: Spring)

**LA 6040: Studio IV: City Matters**

Credits: 6. Contact Hours: Studio 12.

*Prereq: LA 6030*

Exploration of sociopolitical, ecological, and visual-spatial conditions of the urban environment through design at multiple scales. Focus on urban projects that highlight the complexity of human, ecological, and emerging infrastructural systems. Development of innovative strategies for sustainable, healthy, and just cities. Special attention is paid to new technologies and building material in cities. (Typically Offered: Spring)

**LA 6050: Studio V: Land Works/Land Digits**

Credits: 6. Contact Hours: Studio 12.

*Prereq: LA 6040*

Landscape design focusing on broadening the representational palette for landscape architectural concepts applied to complex sites at multiple scales. Emphasis on ideation and technical competency through advanced conceptualization, performance metrics, and skills in design research, digital representation, and teamwork.

**LA 6990: Thesis Research**

Credits: 1-8. Repeatable, maximum of 8 credits.

*Prereq: Instructor Permission for Course*

Advanced and original scholarship in a specialized area. Culminates in a thesis document submitted to and approved by a graduate faculty committee as evidence of mastery of research in landscape architecture. (Typically Offered: Fall, Spring, Summer)