

LANDSCAPE ARCHITECTURE

Landscape Architecture is an environmental design discipline. Landscape architects actively shape the human environment: they map, interpret, imagine, draw, build, conceptualize, synthesize, and project ideas that transform landscapes. The design process involves creative expression that derives from an understanding of the context of site (or landscape) ecosystems, cultural frameworks, functional systems, and social dynamics. Students in our program learn to change the world around them by re-imagining and re-shaping the landscape to enhance its aesthetic and functional dimensions, ecological health, cultural significance, and social relevance. The profession addresses a broad range of landscapes in urban, suburban, rural, and wilderness settings. The scale of landscape architecture projects varies from broad, regional landscape analysis and planning to detailed, individual site-scale designs. The curriculum at Iowa State prepares students for this challenge as they develop their abilities to design and communicate ideas through a sequence of foundational courses and studios. The program seeks to produce graduates who understand the ethical, social, and environmental/ecological dimensions of issues involving changes in the landscape.

Graduates are active in a broad range of careers, such as sustainable site design, land development, park management, environmental advocacy, community planning, urban design, and others. In their professional lives, graduates apply their creative and technical skills in the planned arrangement of natural and constructed elements on the land with a concern for the stewardship and conservation of natural, constructed, and human resources. The resulting environments serve useful, aesthetic, safe, and enjoyable purposes. Graduates are able to communicate effectively with colleagues in the sciences and humanities as well as in the allied professions, and are prepared to work individually and in multidisciplinary teams to address complex problems dealing with the cultural/ecological environment.

The undergraduate curriculum includes one year of the college's Core Design Program followed by a four-year professional program. Admission to the professional program is subject to the approval of a faculty committee at the completion of the Core Design Program. The department also cooperates in the undergraduate minor in Design Studies, Critical Studies in Design, and Digital Media.

Following admission to the professional program, students embark on the traveling studio during the fall semester of their second year. This studio is a full semester's credit of integrated departmental courses and involves extensive travel within and beyond the great Midwest region of North America, to study regional natural systems and the cultural responses to those systems.

To enhance the study of landscape architecture in off-campus settings, the department requires students to choose from among the following three options during the spring and summer of their fourth year: a professional internship, an independent study abroad experience, or National Student Exchange. The department assists students with placement, and additional information is provided through the department and the College of Design's Career Services Office.

Personal laptop/notebook computers and appropriate software are regularly used in classes starting with the second year.

The undergraduate curriculum is fully accredited by the Landscape Architecture Accreditation Board (LAAB) and provides the education which, combined with experience, is necessary for professional license.

Curriculum in Landscape Architecture

The department offers graduate and undergraduate degree programs.

The undergraduate program consists of a five-year curriculum, requiring 149.5 credits, leading to the degree Bachelor of Landscape Architecture. These credits are distributed between a one-year Core Program of 30 credits and a four-year professional program of 119.5 credits.

Admission into the professional program depends upon available resources and is subject to the approval of a faculty committee at the completion of the Core Design Program. Applicants are reviewed on the basis of academic performance, a portfolio of original work, and a written essay.

The BLA from Iowa State University is an LAAB (Landscape Architectural Accreditation Board)-accredited professional degree program. In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for professional licensure. The LAAB is the sole entity recognized by the Council for Higher Education Accreditation to accredit U.S. first professional degree programs in landscape architecture at the Bachelor's and Master's levels.

The department also offers a graduate program leading to the degrees of Master of Landscape Architecture or Master of Science in Landscape Architecture. For more complete graduate program descriptions, contact the department or go to the Graduate program link on the College of Design web page.

Total Degree Requirement: 149.5 cr.

Only 65 cr. from a two-year institution may apply which may include up to 16 technical cr.; 9 P-NP cr. of free electives; 2.00 minimum GPA.

International Perspective: 3 cr.

U.S. Diversity: 3 cr.

Communications: 10 cr.

(C- or better grade)

ENGL 150	Critical Thinking and Communication	3
ENGL 250	Written, Oral, Visual, and Electronic Composition	3
LIB 160	Information Literacy	1
One of the following:		3
ENGL 302	Business Communication	
ENGL 309	Proposal and Report Writing	
ENGL 314	Technical Communication	

Total Credits **10**

Humanities: 9 cr.

9 cr. from Phil, Hist, Music or other humanities course offerings.

Social Sciences: 6 cr.

6 cr. from Anthr, Econ, Pol S, Psych, or Soc.

Mathematics and Science: 12 cr.

One of the following: 3-4

MATH 140	College Algebra	
MATH 145	Applied Trigonometry	
MATH 165	Calculus I (4 crs)	
ENV S 120	Introduction to Renewable Resources	3

Science Elective	6
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Additional General Education Course 3 cr.
3 cr. from 300-400 Level Courses

Design Core: 11.5 cr.

DSN S 102	Design Studio I	4
DSN S 115	Design Collaborative Seminar	0.5-1
or DSN S 110	Design Exchange Seminar I	
DSN S 131	Design Representation	4
DSN S 183	Design Cultures	3

Total Credits 11.5-12

Landscape Architecture: 89 cr.

L A 201	Studio: Landscape Interpretation and Representation	6
L A 202	Studio: Site Design I	6
L A 221	Native Plants of the Savanna Ecotone	3
L A 222	Introduced Plants of the Midwest	3
L A 241	Developing Identity as a Landscape Architect	1
L A 272	Cultural Landscape Studies	3
L A 274	The Social and Behavioral Landscape	3
L A 281	Investigating Landscape Form, Process, and Detail	3
L A 282	Landscape Dynamics	3
L A 301	Site Design II	6
L A 302	Ecological Design at the Regional Scale	6
L A 341	Contemporary Landscape Architecture	1
L A 371	History of Modern Landscapes, 1750 to Present	3
L A 373	Gardens and Landscapes from Antiquity to 1750	3
L A 381	Shaping the Land	3
L A 401	Community Design	6
L A 402	Urban Design	6
L A 444	Landscape Architecture Independent Educational Enrichment	R
L A 442	Professional Practice	2
L A 481	Landscape Construction	3
L A 482	Advanced Landscape Construction	3
DSN S 546	Interdisciplinary Design Studio	6
Plus ten credits professional electives		10

Total Credits 89

Electives: 13 cr.

Complete electives sufficient to complete graduation requirements.

Landscape Architecture, B.L.A.

First Year

Fall	Credits Spring	Credits
DSN S 102 or DSN S 131	4	
DSN S 183 (or General Education)	3 DSN S 131 or DSN S 102	4
DSN S 115	0.5 Soc. Sciences/Humanities Elective	3
ENGL 150 or 250	3 Science Elective or MATH 142	3
Soc. Sciences/Humanities Elective	3 LIB 160	1

MATH 145	3 Elective (Optional for pre-professional year; not required for program application. If not taken in first year, add 3 cr. to a subsequent semester to meet the 150.0 credit total)	3
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16.5 **14**

Second Year

Fall	Credits Spring	Credits
L A 201	6 L A 202	6
L A 221	3 L A 274	3
L A 241	1 L A 222	3
L A 272	3 L A 282	3
L A 281	3 Elective	3

16 **18**

Third Year

Fall	Credits Spring	Credits
L A 301	6 L A 302	6
L A 381	3 L A 341	1
L A 373	3 L A 371	3
ENV S 120	3 Social Science/Humanities Electives	3
ENGL 250	3 Math/Science Elective	3

18 **16**

Fourth Year

Fall	Credits Spring	Credits
L A 402	6 One of the following:	
L A 481	3 L A 444A	0
Social Science/Humanities Elective	3 L A 444B	0
LA electives	3 L A 444C	0
Communications (300 level English)	3	
DSN S 301 (Rome option only)	1	

19 **0**

Fifth Year

Fall	Credits Spring	Credits
L A 401	6 DSN S 546	6
LA Electives	3 L A 442	2
Social Science/Humanities Elective (300 level)	6 L A 482	3
LA Electives	3 Electives/LA Electives	3
	Professional Elective	1

18 **15**

Total Credits: 150.5

Additionally: Each student needs to take 3 credits of a US Diversity (usually covered by LA 272) and 3 credits of an International Perspectives course (usually covered by LA 373). Students also need to take at least 6 credits of 300 level or above in the combined areas of communication, science, math, humanities, and social science (6 total from all the areas).

Graduate Study

The department offers two primary opportunities for professional and postprofessional study: the M.L.A. degree (Master of Landscape Architecture), which provides the skills and knowledge for the application of research and/or scholarly methods to professional practice and the M.S.L.A. degree (Master of Science in Landscape Architecture), which focuses on research on the built environment. Students are also able to pursue double degrees of M.L.A. with Master of Community and Regional Planning (MLA/MCRP), Master of Urban Design (MLA/MUD), and Master of Design of Sustainable Environment (MLA/Mdes SE). Minor work is offered to students taking major work in other departments.

The M.L.A is an accredited professional degree designed for students with or without an undergraduate degree in landscape architecture. The degree provides skills and knowledge as measured by the licensing exam for students seeking to practice as a licensed professional in the public or the private sectors. The M.L.A degree also offers competency for students interested in post professional study and research. Minor work is offered to students taking major work in other departments.

The program offers three concentration tracks in the following topical area – Theory/Urbanism, Technology/Ecology, Advocacy/Community – through coursework and/or an optional thesis and creative component. The concentration in one of the three tracks will be determined by the student in consultation with his/her major professor. It will also be designated in the Program of Study (PoS), to be completed by the end of the first year of study. Concentration electives may be selected from within the department and college and from an approved list. In their final year students will be able to take Creative Component or Thesis option with the approval of their major professor and the department Graduate Committee.

The M.S.L.A. is an unaccredited, research degree addressing landscape architecture as a scholarly endeavor. The degree is primarily intended as an advanced professional degree targeted at students already possessing an accredited first professional degree (B.L.A., B.Arch, M.Arch, etc.) and wishing to pursue in-depth, independent research. The M.S.L.A. is granted upon completion of 36 credits (at least 30 of which are completed at the 500-level) and the acceptance of a thesis or creative component. Periodically, students without accredited, first professional design degrees wish to complete an unaccredited master's degree in landscape architecture. Such students may, in special cases, be allowed to pursue an M.S.L.A., provided they take an additional 12 credits of coursework, at least 6 of which must be an approved design studio, for a total of 48 hours of coursework.

Students interested in the double degree programs should contact the departments to receive a detailed description of requirements. The department also offers courses in the Graduate Certificate Program in Geographic Information Systems (GIS), administered by the Department of Community and Regional Planning. Students are able to take advantage of increasing offerings of interdisciplinary graduate-level electives in all college departments.

Design and Planning: 33 cr.

L A 601 Design Representation	3
L A 602 Studio I – Land/Form & Plant/Scap	6
L A 603 Studio II – Living Systems	6
L A 604 Studio III - City Matters	6

L A 605 Studio IV - LandWorks/LandDigits	6
DSN S 546 Interdisciplinary Design Studio	6
or 2 cr. L A 580 Thesis, Creative Comp. Tutorial + 4 cr. L A 599 Creative Comp. or L A 699 Thesis	

Theory/History/Urbanism: 14 cr.

L A 571 Landscape Architectural Theory I	3
L A 590D Special Topics: History/Theory/Criticism	3
or L A 578D: LA History elective*	
Concentration Theory Elective ***	3
L A 543 Colloquium I	1
L A 545 Colloquium II	1

Technology/Ecology/Materiality: 14 cr.

L A 557 Computer Applications	3
L A 583 Landscape TopoGraphics	3
L A 581 Landscape Structure	3
L A 542 Professional Practice & Enterprise	2
L A 522 Advanced Plant Technology	3

Advocacy/Planning/Policy: 9 cr.

SUS E 531 Human Dimensions of Sustainability	3
L A 593 Environmental Justice in Built Environments	3
Planning Elective**	3

Concentration Electives: 9 cr.

Elective: 3 cr.

Total 82 cr.

Approved Distribution Electives:

LA History elective (3cr.)*

Courses offered on term-by-term basis

L A 590D: Special Topics: History
L A 578D: Landscape Architecture: History

Planning elective (3cr.)**

L A 591: Environmental Law and Planning
C R P 561: Planning Theory for Practice
C R P 592: Land Use and Development Regulation Law
C R P 529: International Planning in Developing Countries

Theory elective (3 cr.)***

Theory course in your concentration area (Theory, Technology or Advocacy) – Select from CRP, ARCH, MUD, SUS E, IND D, or other relevant field in the college or university

Concentration Track Electives

1. Theory/History/Urbanism MLA/MUD
2. Advocacy/Planning/Community MLA/CRP
3. Technology/Ecology/Materiality MLA/MDES SE

Concentration track electives from approved list on separate sheet

Students may also take courses from other departments across college

Elective

3 cr. Non-LA course from college or university courses (incl. LA 509: Field Trip)

Courses primarily for undergraduates:

L A 201: Studio: Landscape Interpretation and Representation

(1-15) Cr. 6. F.

Prereq: Enrollment in the 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.

L A 202: Studio: Site Design I

(1-15) Cr. 6. S.

Prereq: L A 201

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.

L A 211: Digital Design Methods for Landscape Architecture

(3-0) Cr. 3. S.

Introduction of computer applications and standards used by landscape architects and other design professions and their place in a replicable work flow. Foundational knowledge and basic skills in a range of industry-standard 2D, 3D, and 4D computer applications used for design development and communication.

L A 221: Native Plants of the Savanna Ecotone

(2-3) Cr. 3. F.

Prereq: Enrollment in the 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.

L A 222: Introduced Plants of the Midwest

(2-3) Cr. 3. S.

Prereq: L A 221

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.

L A 241: Developing Identity as a Landscape Architect

(1-0) Cr. 1. F.

Prereq: Enrollment in the 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.

L A 270: Foundations in Natural Resource Policy and History

(Cross-listed with ENV S, NREM). (3-0) Cr. 3. Alt. F., offered odd-numbered years.

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.

L A 272: Cultural Landscape Studies

(3-0) Cr. 3. F.

Prereq: Enrollment in the professional program

Exploration of cultural landscapes, from broad settlement patterns to individual sites, with an emphasis on the origins and evolution of landscapes. 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. Exploration of landscapes as persistent (yet ephemeral) repositories of culture. Lectures, reading, field studies, and writing. Meets U.S. Diversity Requirement

L A 274: The Social and Behavioral Landscape

(3-0) Cr. 3. S.

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

L A 281: Investigating Landscape Form, Process, and Detail

(1-6) Cr. 3. F.

Prereq: Enrollment in 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.

L A 282: Landscape Dynamics

(2-2) Cr. 3. S.

Prereq: Sophomore standing

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.

L A 301: Site Design II

(1-15) Cr. 6. F.

Prereq: L A 202

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.

L A 302: Ecological Design at the Regional Scale

(1-15) Cr. 6. S.

Prereq: L A 282, L A 301, L A 381 and NREM 120

Application of ecological theories and processes in design and planning at the hundred plus-acre scale specifically focusing on urban and urban fringe landscapes. Apply advanced landscape analysis of soil, water, and vegetation utilizing geographic information systems. Particular focus on stream and wetland restoration, mitigation, and regulations and developing design representations for public use.

L A 309: Field Travel

Cr. 1. Repeatable, maximum of 2 times. F.S.SS.

Prereq: Enrollment in the professional program and permission of instructor

Observation of and reflection on professional practice and landscapes in urban, rural, and wilderness areas. Offered on a satisfactory-fail basis only.

L A 322: Fundamentals of Planting Design

(2-3) Cr. 3.

Prereq: L A 221

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.

L A 341: Contemporary Landscape Architecture

(1-0) Cr. 1. S.

Prereq: L A 301

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 (L A 444 A, B or C).

L A 371: History of Modern Landscapes, 1750 to Present

(3-0) Cr. 3. S.

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.

L A 373: Gardens and Landscapes from Antiquity to 1750

(3-0) Cr. 3. F.

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.

L A 381: Shaping the Land

(3-0) Cr. 3. F.

Prereq: L A 282 and MATH 143 or MATH 145

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.

L A 401: Community Design

(1-15) Cr. 6. F.

Prereq: L A 402

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.

L A 401H: Community Design: Honors

(1-15) Cr. 7. F.

Prereq: L A 402

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.

L A 402: Urban Design

(1-15) Cr. 6. F.

Prereq: L A 302

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.

L A 402H: Urban Design: Honors

(1-15) Cr. 7. F.

Prereq: L A 302

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.

L A 403H: Senior Thesis Preparation Tutorial

Cr. 2. F.

Prereq: L A 402, permission of thesis advisor, enrollment in Honors program
Preparation for senior thesis.

L A 404: Advanced Landscape Architectural Design

(1-15) Cr. 6. Repeatable, maximum of 2 times. S.

Prereq: L A 401

Advanced forum for the demonstration of sophistication in landscape architectural design. Experimentation and innovation are encouraged.

L A 404H: Advanced Landscape Architectural Design: Honors

(1-15) Cr. 6-7. Repeatable, maximum of 2 times. S.

Prereq: L A 401

Advanced forum for the demonstration of sophistication in landscape architectural design. Experimentation and innovation are encouraged.

L A 405H: Senior Thesis

(0-15) Cr. 6. S.

Prereq: L A 401, L A 402, L A 403, enrollment in Honors program and permission of adviser, chair and thesis adviser

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

L A 417: Urban and Peri-urban Watershed Assessment

(2-3) Cr. 3. F.

Prereq: Junior classification and 6 credits of natural science

Assessment and reduction of impacts in urban and peri-urban watershed areas. Course prepares students to work with various analysis methods for vegetation, topography, stormwater and stream condition as well as work with data from other disciplines. Emphasis on communicating with the public. Introductory GIS and GPS technologies are utilized. Learning is largely field-based.

L A 421: Advanced Planting Design

(Dual-listed with L A 521). (2-3) Cr. 3. S.

Prereq: L A 322 or permission of instructor

Theory and practice of planting design, with emphasis on the ecological, cultural, and aesthetic factors affecting planting design and vegetation management in the built environment. Research, case studies, and design projects.

L A 442: Professional Practice

(Dual-listed with L A 542). (2-0) Cr. 2. S.

Prereq: L A 481

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.

L A 444: Landscape Architecture Independent Educational Enrichment

Cr. R. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 341 or permission of adviser and chair

Independent educational enrichment through exploration of landscape architectural practice in a professional internship, international studies, or out-of-region national study experience.

L A 444A: Landscape Architecture Independent Educational Enrichment: Professional Internship

Cr. R. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 341 or permission of adviser and chair

Independent educational enrichment through exploration of landscape architectural practice in a professional internship, international studies, or out-of-region national study experience.

L A 444B: Landscape Architecture Independent Educational Enrichment: Study Abroad

Cr. R. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 341 or permission of adviser and chair

Independent educational enrichment through exploration of landscape architectural practice in a professional internship, international studies, or out-of-region national study experience.

L A 444C: Landscape Architecture Independent Educational Enrichment: National Student Exchange

Cr. R. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 341 or permission of adviser and chair

Independent educational enrichment through exploration of landscape architectural practice in a professional internship, international studies, or out-of-region national study experience.

L A 457: Landscape Parametrics & Design Computing

(Dual-listed with L A 557). (3-0) Cr. 3. F.

Prereq: Junior classification

Exploration of computational representation of the landscape palette. Geometric parameters for terrain, vegetation, water, weather and lighting effects are modeled and developed algorithmically. Basic computer programming logic and computer graphics interactivity are combined to produce stand-alone software application prototypes that address core landscape design principles.

L A 461I: Introduction to GIS

(Cross-listed with ENSCI, ENV S, IA LL). Cr. 4. SS.

Descriptive and predictive GIS modeling techniques, spatial statistics, and map algebra. Application of GIS modeling techniques to environmental planning and resource management.

L A 478: Topical Studies in Landscape Architecture

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 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.

L A 478A: Topical Studies in Landscape Architecture: Landscape Design

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior or graduate classification

Offerings vary with each term; check with department for available sections.

L A 478B: Topical Studies in Landscape Architecture: Planting Design

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior or graduate classification

Offerings vary with each term; check with department for available sections.

L A 478C: Topical Studies in Landscape Architecture: Construction

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior or graduate classification

Offerings vary with each term; check with department for available sections.

L A 478D: Topical Studies in Landscape Architecture: History/Theory/Criticism

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior or graduate classification

Offerings vary with each term; check with department for available sections.

L A 478E: Topical Studies in Landscape Architecture: Landscape Planning

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior or graduate classification

Offerings vary with each term; check with department for available sections.

L A 478F: Topical Studies in Landscape Architecture: Urban Design

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior or graduate classification

Offerings vary with each term; check with department for available sections.

L A 478G: Topical Studies in Landscape Architecture: Graphics

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior or graduate classification

Offerings vary with each term; check with department for available sections.

L A 478H: Topical Studies in Landscape Architecture: Honors

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior or graduate classification

Offerings vary with each term; check with department for available sections.

L A 478I: Topical Studies in Landscape Architecture: Interdisciplinary Studies

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior or graduate classification

Offerings vary with each term; check with department for available sections.

L A 478J: Topical Studies in Landscape Architecture: International Studies

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior or graduate classification

Offerings vary with each term; check with department for available sections.

L A 478K: Topical Studies in Landscape Architecture: Computer Applications

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior classification or graduate standing

Offerings vary with each term; check with department for available sections.

L A 478L: Topical Studies in Landscape Architecture: Ecological Design

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior classification or graduate standing

Offerings vary with each term; check with department for available sections.

L A 478M: Topical Studies in Landscape Architecture: Landscape Architecture: Social/Behavioral

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior classification or graduate standing

Offerings vary with each term; check with department for available sections.

L A 478N: Topical Studies in Landscape Architecture: Natural Resources

Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS.

Prereq: L A 202 or senior classification or graduate standing

Offerings vary with each term; check with department for available sections.

L A 481: Landscape Construction

(3-0) Cr. 3. F.

Prereq: L A 381

Development of construction details with emphasis on materials and their aesthetic and functional uses as building materials. Explore characteristics and uses of construction materials and application of wood systems, paving systems, retaining walls, masonry and concrete systems, and metals; investigate structural theory of wood systems. Preliminary preparation of construction documents.

L A 482: Advanced Landscape Construction

(3-0) Cr. 3. S.

Prereq: L A 481

Advanced site construction issues, with emphasis on water and irrigation systems, mechanical and electrical systems, site lighting, proposal preparation, project scheduling, project costing and estimating, and master specification editing.

L A 490: Independent Study

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490A: Independent Study: Landscape Design**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490B: Independent Study: Planting Design**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490C: Independent Study: Construction**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.

L A 490D: Independent Study: History/Theory/Criticism

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490E: Independent Study: Landscape Planning**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490F: Independent Study: Urban Design**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490G: Independent Study: Graphics**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490H: Independent Study: Honors**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490I: Independent Study: Interdisciplinary Studies**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490J: Independent Study: International Studies**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490K: Independent Study: Computer Applications**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490L: Independent Study: Ecological Design**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490M: Independent Study: Social/Behavioral**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 490N: Independent Study: Natural Resources**

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: Written approval of instructor and department chair on required form
Investigation of a topic of special interest to the student.**L A 491: Environmental Law and Planning**

(Dual-listed with L A 591). (Cross-listed with C R P, ENV S). (3-0) Cr. 3. S.

Prereq: 6 credits in natural sciences

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.

Courses primarily for graduate students, open to qualified undergraduates:**L A 504: Landworks: Advanced Landscape Architecture**

(1-15) Cr. 6.

Prereq: Graduate classification

Graduate studio in landscape architectural design working on complex sites involving multiple scales of design. Course emphasizes advanced skills in design research and representation and application of theory, as well as technical competency and teamwork. Development of original ideas, experimentation, and innovation.

L A 517: Urban and Peri-urban Watershed Assessment

(Dual-listed with L A 417). (2-3) Cr. 3. F.

Prereq: Junior classification and 6 credits of natural science

Assessment and reduction of impacts in urban and peri-urban watershed areas. Course prepares students to work with various analysis methods for vegetation, topography, stormwater and stream condition as well as work with data from other disciplines. Emphasis on communicating with the public. Introductory GIS and GPS technologies are utilized. Learning is largely field-based.

L A 521: Advanced Planting Design

(Dual-listed with L A 421). (2-3) Cr. 3. S.

Prereq: L A 322 or permission of instructor

Theory and practice of planting design, with emphasis on the ecological, cultural, and aesthetic factors affecting planting design and vegetation management in the built environment. Research, case studies, and design projects.

L A 522: Advanced Plant Technology

(1-4) Cr. 3. F.

Prereq: Junior or graduate standing

Planting design and emergent technologies for design performance in the urban built environment. Emphasis on innovative strategies for planting design and plant technology in building design, sustainable streetscapes, and urban systems integrating storm water and urban "hardscape" design. Interviews with practitioners, technical experts and agency program leaders will complement readings, lecture and site visits to exemplary project sites.

L A 541: Principles of Research for Landscape Architects

(3-0) Cr. 3. F.

Prereq: Graduate standing

Examination of design inquiry and research methods appropriate to landscape architectural projects, including bibliographical, historical, numerical, statistical, survey, and geographical methods. Readings, discussions, and application problems. Preparation of a research proposal.

L A 542: Professional Practice

(Dual-listed with L A 442). (2-0) Cr. 2. S.

Prereq: L A 481

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.

L A 557: Landscape Parametrics & Design Computing

(Dual-listed with L A 457). (3-0) Cr. 3. F.

Prereq: Junior classification

Exploration of computational representation of the landscape palette. Geometric parameters for terrain, vegetation, water, weather and lighting effects are modeled and developed algorithmically. Basic computer programming logic and computer graphics interactivity are combined to produce stand-alone software application prototypes that address core landscape design principles.

L A 567: Advanced GIS Landscape Modeling

(0-6) Cr. 3.

Prereq: L A 302 or C R P 451/C R P 551

Application of Geographic Information Systems (GIS) modeling techniques to landscape planning and management issues. Selection, acquisition, and conversion of digital landscape data. Modeling applications for studio projects, outreach projects, and research projects.

L A 571: Landscape Architectural Theory I

(3-0) Cr. 3. F.

Prereq: graduate classification or permission of instructor

Examination of the development of ideas in landscape architecture in their historical context of social practices and knowledge systems. Emphasis on exposure to key modern and contemporary texts and projects in landscape architecture, architecture, art, and related fields. Readings, discussions, and writings.

L A 573: Landscape Architectural Theory II

(3-0) Cr. 3. S.

Prereq: Graduate standing or permission of instructor

Exploration of major theories and emerging practices of landscape architectural design and their relationships to broader, cultural and theoretical perspectives. Emphasis on developing critical ways of analyzing ideas. Lectures, readings, discussion, and writings.

L A 580: Thesis, Creative Component Tutorial

Cr. 1-4. Repeatable, maximum of 4 credits. F.S.SS.

Prereq: Permission of major professor

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.

L A 590: Special Topics

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590A: Special Topics: Landscape Design

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590B: Special Topics: Planting Design

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590C: Special Topics: Construction

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590D: Special Topics: History/Theory/Criticism

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590E: Special Topics: Landscape Planning

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590F: Special Topics: Urban Design

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590G: Special Topics: Graphics

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590I: Special Topics: Interdisciplinary Studies

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590J: Special Topics: International Studies

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590K: Special Topics: Computer Applications

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590L: Special Topics: Ecological Design

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590M: Special Topics: Social/Behavioral

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 590N: Special Topics: Natural Resources

Cr. 1-6. Repeatable, maximum of 3 times. F.S.SS.

Prereq: graduate standing.

L A 591: Environmental Law and Planning

(Dual-listed with L A 491). (Cross-listed with C R P). (3-0) Cr. 3. S.

Prereq: 6 credits in natural sciences

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.

L A 599: Creative Component

Cr. 1-8. Repeatable, maximum of 8 credits. F.S.SS.

Prereq: Permission of major professor

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.

Courses for graduate students:**L A 699: Thesis Research**

Cr. 1-8. Repeatable, maximum of 8 credits. F.S.SS.

Prereq: Permission of major professor