

Landscape Architecture

Undergraduate Study

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 recommends that each student participate in optional college or department-led international study opportunities such as the Rome summer offering. In addition, 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 licensure.

Graduate Study

The department offers two primary opportunities for professional and post-professional study: the M.L.A. degree, which provides the skills and knowledge for professional practice and the M.S.L.A. degree, which focuses on graduate-level research on the built environment. Minor work is offered to students taking major work in other departments.

The M.L.A. degree is a first professional degree in landscape architecture, for students with undergraduate degrees other than landscape architecture. Students enroll in a six-semester full-time program of coursework, some of which overlaps with the bachelor's degree curriculum. However, graduate-level work is accomplished by a minimum of 30 credits of advanced courses, both required and elective, completed at the 500-level. This coursework also provides a chance

to concentrate study in a topical area of practice, through elective courses and/or an optional thesis. Students' concentrations--in areas such as history-theory; design-art; ecological design; or community design, etcetera--are determined by the student in conjunction with his/her major professor and will be designated in a program of study, to be completed by the end of his/her first year. Electives may be selected from within the department and college as well as from other departments across campus.

The M.L.A. program has recently been granted candidacy status by LAAB and is undergoing a required 3-year review for initial accreditation. Full accreditation status is expected in 2013. Students who graduate before 2013 will be considered by LAAB to have graduated from an accredited program.

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 may also enter a special program to earn both the M.L.A. and the master of community and regional planning (M.C.R.P.) degrees. Students interested in the double degree M.L.A./M.C.R.P. program should contact the departments to receive a detailed description of requirements. The department also teaches in the Graduate Certificate Program in Geographic Information Systems (GIS), administered by the Department of Community and Regional Planning.

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	Report and Proposal 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: 2-4

MATH 142	Trigonometry and Analytic Geometry (3 crs)	
MATH 141	Trigonometry (2 crs)	
MATH 165	Calculus I (4 crs)	
NREM 120	Introduction to Renewable Resources	3
Science Elective		6

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: 88 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 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 441	Professional Practice	2
L A 444	Landscape Architecture Independent Educational Enrichment	R
L A 481	Landscape Construction	3
L A 482	Advanced Landscape Construction	3
DSN S 446	Interdisciplinary Design Studio	6
Plus nine credits professional electives		9
Total Credits		85

Electives: 13 cr.

Complete electives sufficient to complete graduation requirements.

See also: A 4-year plan of study grid showing course template by semester.

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 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 NREM, ENV S). (3-0) Cr. 3. Alt. S., offered 2014.

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.

(Cross-listed with DSN S). (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. Alt. F., offered 2012. *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.

(Cross-listed with DSN S). (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.

(Cross-listed with DSN S). (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 141*

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.

(Cross-listed with DSN S). (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.

(Cross-listed with DSN S). (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.(Dual-listed with L A 517). (Cross-listed with ENV S). (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. Three venues for collaborative learning form the basis of the course: topical research inquiry, case history investigation, and completion of one comprehensive project design.

L A 441. Professional Practice.

(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 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. Nonmajor graduate credit.

L A 478. Landscape Architecture.

(Dual-listed with L A 578N). (Cross-listed with DSN S). Cr. 2-3. Repeatable. F.S.SS. *Prereq: Senior classification or graduate standing*

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. Landscape Architecture: Landscape Design.

(Dual-listed with L A 578A). (Cross-listed with DSN S). 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 478B. Landscape Architecture: Planting Design.

(Dual-listed with L A 578B). (Cross-listed with DSN S). 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 478C. Landscape Architecture: Construction.

(Dual-listed with L A 578C). (Cross-listed with DSN S). 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 478D. Landscape Architecture: History/Theory/Criticism.

(Dual-listed with L A 578D). (Cross-listed with DSN S). 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 478E. Landscape Architecture: Landscape Planning.

(Dual-listed with L A 578E). (Cross-listed with DSN S). 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 478F. Landscape Architecture: Urban Design.

(Dual-listed with L A 578F). (Cross-listed with DSN S). 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 478G. Landscape Architecture: Graphics.

(Dual-listed with L A 578G). (Cross-listed with DSN S). 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 478H. Landscape Architecture: Honors.

(Cross-listed with DSN S). 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 478I. Landscape Architecture: Interdisciplinary Studies.

(Dual-listed with L A 578I). (Cross-listed with DSN S). 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 478J. Landscape Architecture: International Studies.

(Dual-listed with L A 578J). (Cross-listed with DSN S). 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 478K. Landscape Architecture: Computer Applications.

(Dual-listed with L A 578K). (Cross-listed with DSN S). Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS. *Prereq: L A 371 or senior classification or graduate standing*

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 478L. Landscape Architecture: Ecological Design.

(Dual-listed with L A 578L). (Cross-listed with DSN S). Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS. *Prereq: L A 371 or senior classification or graduate standing*

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 478M. Landscape Architecture: Social/Behavioral.

(Dual-listed with L A 578M). (Cross-listed with DSN S). Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS. *Prereq: L A 371 or senior classification or graduate standing*

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 478N. Landscape Architecture: Natural Resources.

(Dual-listed with L A 578N). (Cross-listed with DSN S). Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS. *Prereq: L A 371 or senior classification or graduate standing*

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 481. Landscape Construction.

(1-4) 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.

(1-4) 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 DSN S, ENV S, 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.

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). (Cross-listed with ENV S). (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. Three venues for collaborative learning form the basis of the course: topical research inquiry, case history investigation, and completion of one comprehensive project design.

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 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 578. Landscape Architecture.

(Dual-listed with L A 478). (Cross-listed with DSN S). Cr. 2-3. Repeatable. F.S.SS.

Prereq: *Senior classification or graduate standing*

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 578A. Landscape Architecture: Landscape Design.

(Dual-listed with L A 478B). (Cross-listed with DSN S). 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 578B. Landscape Architecture.

(Dual-listed with L A 478B). (Cross-listed with DSN S). Cr. 2-3. Repeatable. F.S.SS. *Prereq: Senior classification or graduate standing*
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 578C. Landscape Architecture: Construction.

(Dual-listed with L A 478C). (Cross-listed with DSN S). 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 578D. Landscape Architecture: History/Theory/Criticism.

(Dual-listed with L A 478D). (Cross-listed with DSN S). 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 578E. Landscape Architecture: Landscape Planning.

(Dual-listed with L A 478E). (Cross-listed with DSN S). 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 578F. Landscape Architecture: Urban Design.

(Dual-listed with L A 478F). (Cross-listed with DSN S). 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 578G. Landscape Architecture: Graphics.

(Dual-listed with L A 478G). (Cross-listed with DSN S). 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 578H. Landscape Architecture: Honors.

(Cross-listed with DSN S). 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 578I. Landscape Architecture: Interdisciplinary Studies.

(Dual-listed with L A 478I). (Cross-listed with DSN S). 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 578J. Landscape Architecture: International Studies.

(Dual-listed with L A 478J). (Cross-listed with DSN S). 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 578K. Landscape Architecture: Computer Applications.

(Dual-listed with L A 478K). (Cross-listed with DSN S). Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS. *Prereq: L A 371 or senior classification or graduate standing*
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 578L. Landscape Architecture: Ecological Design.

(Dual-listed with L A 478L). (Cross-listed with DSN S). Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS. *Prereq: L A 371 or senior classification or graduate standing*
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 578M. Landscape Architecture: Social/Behavioral.

(Dual-listed with L A 478M). (Cross-listed with DSN S). Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS. *Prereq: L A 371 or senior classification or graduate standing*
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 578N. Landscape Architecture: Natural Resources.

(Dual-listed with L A 478N). (Cross-listed with DSN S). Cr. 2-3. Repeatable, maximum of 3 times. F.S.SS. *Prereq: L A 371 or senior classification or graduate standing*
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 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 DSN S, ENV S, C R P). (3-0) Cr. 3. S. *Prereq: Graduate classification*
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*