LANDSCAPE ARCHITECTURE (LAND ARC)

LAND ARC 1 — COOPERATIVE EDUCATION/CO-OP IN LANDSCAPE ARCHITECTURE
1 credit.

Full-time off-campus work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career. Students receive credit only for the term in which they are actively enrolled and working. The same work experience may not count towards credit in LAND ARC 399.
Requisites: So st, and consent of supervising instructor and academic advisor.
Repeatable for Credit: Yes, unlimited number of completions

LAND ARC 201 — INTRODUCTORY LANDSCAPE ARCHITECTURE STUDIO
2 credits.

Introduction to the techniques of landscape design, planning, and management through studio exercises.
Requisites: LAND ARC 250 or con reg
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC 250 — SURVEY OF LANDSCAPE ARCHITECTURE DESIGN
3 credits.

Principles of landscape and environmental design; incorporates elements of landscape planning and management. Provides background to the ideas and personalities shaping landscape architecture in America.
Requisites: Open to Freshmen
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC 260 — HISTORY OF LANDSCAPE ARCHITECTURE
3 credits.

A critical and historical analysis of our design of outdoor space.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC 261 — PRINCIPLES OF LANDSCAPE ARCHITECTURE DESIGN AND GRAPHICS
4 credits.

Basic principles in the design of landscapes to aid the student in developing individual capacities and approaches to designing. Principles of graphic communication media and development of practical graphic skills.
Requisites: Declared in Landscape Architecture major
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC 262 — LANDSCAPE INVENTORY AND EVALUATION METHODS
4 credits.

Inventory and evaluation of physical, biological, visual, and cultural site resources to determine their potential for enhancement of human activities and their sensitivities to use-impact. Emphasis on information sources, data gathering methods and analysis techniques with projects to develop proficiency.
Requisites: LAND ARC 250 or consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC/HORT 263 — LANDSCAPE PLANTS I
3 credits.

Field identification, landscape characteristics, uses, environmental requirements, adaptability of woody ornamental plants; their autumn and winter character.
Requisites: An intro botany crse or cons inst
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC/ANTHRO/ART HIST/DS/HISTORY 264 — DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC 270 — LANDSCAPE ARCHITECTURE WORKSHOP
1-2 credits.

Lectures, projects, and studio exercises covering topical areas of landscape architecture. Open to non-majors
Requisites: LAND ARC 250 or cons inst.
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2010

LAND ARC 289 — HONORS INDEPENDENT STUDY
1-2 credits.

INTER-AG 288
Requisites: Enrolled in the CALS Honors Prgm Sophomore or Junior standing.
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
LAND ARC 299 — INDEPENDENT STUDIES
1-3 credits.

Requisites: Open to Freshmen, Sophomore or Junior standing written consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

LAND ARC/F&W ECOL/HORT/PL PATH 309 — DISEASES OF TREES AND SHRUBS
3 credits.

Fundamental disease concepts, pathogens and causal agents, diagnosis, and biologically rational principles and practices for management of diseases of trees and shrubs. For degree students and professionals. One extended lecture with discussion and one lab or field trip per week.
Requisites: One semester of plant sci or consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC 312 — GRAPHICS FOR DESIGNERS
3 credits.

Principles of graphic communication media, and development of practical graphic skills to enhance the professional student's ability to communicate with lay and professional audiences.
Requisites: Concurrent registration in a design course
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC 321 — ENVIRONMENT AND BEHAVIOR STUDIO - DESIGNING HEALTH PROMOTING ENVIRONMENTS
3 credits.

This course is a design studio in with an emphasis on the application of design principles aimed at promoting people's health and wellbeing in the built environment.
Requisites: LAND ARC 201, 261, 262, 312 and DS 221
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC 351 — HOUSING AND URBAN DESIGN
4 credits.

An application of landscape design principles and problem-solving methods to housing and urban issues. Introduction to physical site design, land-use controls, and the relationship between housing and associated land uses. Projects focus on the central city and/or suburbs.
Requisites: LAND ARC 261 and 365 or concurrent registration
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC 353 — LANDSCAPE ARCHITECTURAL TECHNOLOGY I
3 credits.

Problems dealing with the comprehension and modification of the earth's surface including landform design, preparation of grading plans, earthwork calculations.
Requisites: MATH 112 and 113 (or equivalent) and CEE 450
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC 354 — LANDSCAPE ARCHITECTURAL TECHNOLOGY II
3 credits.

Problems dealing with construction detailing, including roadways, drainage structures, construction materials, cost estimating, specifications and working drawings.
Requisites: LAND ARC 353
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC/BSE/DS 356 — SUSTAINABLE RESIDENTIAL CONSTRUCTION
3 credits.

Properties and use of building materials, framing systems, HVAC systems, code requirements, conservation of natural resources in building construction and operation.
Requisites: MATH 112, 114, or 171
Repeatable for Credit: No
Last Taught: Spring 2016

LAND ARC/ENVIR ST 361 — WETLANDS ECOLOGY
3 credits.

Types, origins, settings, and structure of wetlands. Physical, biological, and cultural values, uses and assessments. Physical and biological characteristics and dynamics. Protection, management and restoration. Field trips, literature review, term paper, and personal observations required.
Requisites: Upper class st; basic college-level biology or equiv (such as relevant physical sciences)
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC 365 — PLANTING DESIGN I
3 credits.

Fundamentals of planting composition with emphasis on visual consideration of ecological relationships. Lectures enhanced by student sketches, plans, and models.
Requisites: LAND ARC 262, 263, and 353 or consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC/ENVIR ST/F&W ECOL/G L E/GEOG/GEOSCI 371 — INTRODUCTION TO ENVIRONMENTAL REMOTE SENSING
3 credits.

Introduction to the Earth as viewed from above, focusing on use of aerial photography and satellite imagery to study the environment. Includes physical processes of electromagnetic radiation, data types and sensing capabilities, methods for interpretation, analysis and mapping, and applications.
Requisites: MATH 114 Sophomore standing
Repeatable for Credit: No
Last Taught: Fall 2017
LAND ARC ENVIR ST/F&W ECOL/G L E/GEOG/GEOSCI 372 — INTERMEDIATE ENVIRONMENTAL REMOTE SENSING
3 credits.
Examines intermediate-level concepts in information extraction, data processing and radiative transfer relevant to remote sensing of the environment. Includes transforms, image correction, classification algorithms and change detection, with emphasis on applications for land use planning and natural resource management.
Requisites: Envir St 301 or consent of instructor, sophomore standing
Repeatable for Credit: No
Last Taught: Spring 2015

LAND ARC 375 — SPECIAL TOPICS
1-4 credits.
Requisites: Cons inst
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

LAND ARC 399 — COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.
Requisites: So, Jr or Sr st and cons supervising inst, advisor, and program coordinator
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2017

LAND ARC 400 — STUDY ABROAD IN LANDSCAPE ARCHITECTURE
1-6 credits.
Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. W-Madison Study Abroad Program
Requisites: Current registration in a U.
Repeatable for Credit: Yes, unlimited number of completions

LAND ARC 451 — OPEN SPACE PLANNING AND DESIGN
3 credits.
Form-giving design of open spaces in urban and rural settings and management for amenity and functional values. Integration of human activity requirements and experiences with physical and natural site features
Requisites: LAND ARC 351, 354, 365
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC 462 — REGIONAL DESIGN
3 credits.
Exploration of broad scale design issues to develop synthesis and design skills. Uses spatial form and bioregional cultural, ecological and environmental concepts to solve land use and conservation problems. Emphasizes sustainable design. Introduces public and non-profit design tools.
Requisites: LAND ARC 351, 354, 365, 451 or Grad st and cons inst
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC/URB R PL 463 — EVOLUTION OF AMERICAN PLANNING
3 credits.
The nature and cultural significance of contemporary methods for the systematic formulation of public policies for community, metropolitan, and state development through comprehensive planning. Historic roots, recent trends and new directions in American planning concepts, institutions and professional specializations.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Summer 2016

LAND ARC 550 — PROFESSIONAL PRACTICE IN LANDSCAPE ARCHITECTURE
3 credits.
Introduction to operational procedures used in professional offices ranging from private landscape architectural design firms to public agencies. Practical experience project organization and management including the preparation of project manuals, legal documents, and construction contracts.
Requisites: LAND ARC 351 451 con reg in LAND ARC 610
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC 551 — SENIOR PROJECT IN LANDSCAPE ARCHITECTURE
4 credits.
Problems in landscape design, planning and management for which students take the initiative in their definition and solution. Provides an opportunity for synthesis of the knowledge, skills, and approaches learned in previous course work.
Requisites: LAND ARC 610
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC/CIV ENGR/ENVIR ST 556 — REMOTE SENSING DIGITAL IMAGE PROCESSING
3 credits.
Techniques of enhancement and quantification of remote sensing imagery. Emphasis on processing and analyzing data gathered by airborne and satellite sensors. Techniques to quantitatively analyze data from photography, electro-optical scanners, satellite systems, and radar and passive microwave systems. A 5-week practicum with applications to: agriculture and forestry, geology and soils, water quality, and urban and regional planning.
Requisites: Civ Engr/Envir St/Forestry 303 or authorization
Repeatable for Credit: No
Last Taught: Spring 2016
LAND ARC/F&W ECOL/ZOOLOGY 565 — PRINCIPLES OF LANDSCAPE ECOLOGY
2 credits.

Landscape ecology emphasizes the importance of spatial patterns at broad scales. Concepts and applications are emphasized, especially for seniors and graduate students in applied natural resource fields. The course is also a prerequisite for Zoology/Forest Ecology 665, Advanced Landscape Ecology. Lecture format with discussion.

Requisites: Botany/Zoology/Forest 460, or Forest 550, a crse in stats, cons inst
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC 610 — LANDSCAPE ARCHITECTURE SEMINAR
1-2 credits.

Environmental problems and issues related to project, urban or regional scale.

Requisites: Sr st
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

LAND ARC/URB R PL 622 — APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS IN PLANNING
3 credits.

Explores planning-related GIS data, applications, analytical tools, and issues. Grad st or cons inst. Priority given to Urb R PI stdts

Requisites: Intro GIS course or experience using GIS is a pre-requisite.
Repeatable for Credit: No
Last Taught: Fall 2016

LAND ARC 630 — GEODESIGN FOUNDATIONS
3 credits.

This online lecture, discussion and lab course is designed specifically for students enrolled in the Capstone Certificate in Geodesign. Geodesign is the integration of design and planning, the social and economic sciences, the physical and natural sciences, human values and public participation, using geographic information systems (GIS) with the goal of creating a better, more sustainable and resilient future. This course focuses on understanding the history, leaders, trends, and various frameworks of Geodesign. This introduction to Geodesign will cover a broad body of knowledge that includes: historical foundations of Geodesign; critically evaluate Geodesign frameworks; relationship between Geodesign and planning and design processes, including decision-making frameworks; roles and practices of geospatial technology for planning and design; interdisciplinary application of evidence based design using social and natural science research; communication of spatial decisions, data, information, and processes; spatially evaluate public policy and regulation; and values and ethical issues in Geodesign.

Requisites: Students must be admitted into the Capstone Certificate in Geodesign Program
Repeatable for Credit: No

LAND ARC 631 — GEODESIGN METHODS
3 credits.

This course focuses on understanding and application of methods and technology used in the Geodesign framework using the following models: representation, process, evaluation, change, impact, and decision. Students write a methods focused, preliminary project proposal. Geodesign methods and technology are vast and continually evolving, but will be limited to industry standards: Esri ArcGIS Desktop, Esri CityEngine, Trimble SketchUp, and various open-source alternatives as needed (i.e. QGIS, Grass, etc). Students will be exposed to and may use, at their own discretion in coordination the instructor, other open-source alternatives on individual assignments when software and methods choices are at the discretion (see assignment statements for specific requirements).

Requisites: Students must be admitted into the Capstone Certificate in Geodesign Program
Repeatable for Credit: No

LAND ARC 633 — GEOSPATIAL APPROACHES TO CONSERVATION AND ADAPTATION
2 credits.

Students will explore and use applications of GIS particularly related to landscape ecology, environmental analysis, and conservation design. Engaged students will: a. learn/practice how to solve spatial environmental questions; b. proficiently apply design thinking toward landscape conservation and adaptation solutions.

Requisites: LAND ARC 630 and LAND ARC 631 and admission to the Capstone Certificate in Geodesign
Repeatable for Credit: No

LAND ARC 634 — GEODESIGN CAPSTONE PROJECT
3 credits.

This capstone course is the culmination of the yearlong Geodesign Certificate Program. It is designed for students to demonstrate the skills and knowledge that they have acquired in the four prerequisite courses by resolving a "real world" geodesign problem. Students will work with their advisors on projects of their own choosing and as agreed upon by their advisors and the program coordinator and director.

Requisites: LAND ARC 630, LAND ARC 631, LAND ARC 633, and LAND ARC 671 and admission to the Capstone Certificate in Geodesign
Repeatable for Credit: No

LAND ARC/DS 639 — CULTURE AND BUILT ENVIRONMENT
3 credits.

The course explores cultural values embedded in buildings through understanding physical configurations, social organizations, practiced/symbolic/representational aspects of buildings. The course covers a wide range of cultures and the built environments they produce including examples from the Americas, the Middle East, as well as those of the many ethnic minorities in the U.S.

Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Fall 2015
LAND ARC 651 — PLANT COMMUNITY RESTORATION AND MANAGEMENT WORKSHOP  
4 credits.

Formulation of plant community restoration and management plans; including the preparation of planting plans and working drawings for implementation. Classroom and practical exposure to natural areas management tools, including prescription prairie fire.  
**Requisites:** LAND ARC 262 or Grad st  
**Repeatable for Credit:** Yes, unlimited number of completions  
**Last Taught:** Spring 2016

LAND ARC 666 — RESTORATION ECOLOGY  
3 credits.

Philosophy and techniques in the use of native vegetation for landscape purposes. Application of current knowledge in restoration and maintenance of native plant communities. Lecture, lab and field.  
**Requisites:** LAND ARC 365 or cons inst  
**Repeatable for Credit:** No  
**Last Taught:** Fall 2017

LAND ARC 667 — FIELD STUDY: NATIVE PLANT COMMUNITIES  
3 credits.

Field analysis and interpretation of the vegetational composition, aesthetic quality and effects of disturbance within a variety of native Wisconsin plant communities. Field work, readings and discussions.  
**Requisites:** Plant identification course(s) and cons inst  
**Repeatable for Credit:** No  
**Last Taught:** Summer 2008

LAND ARC/BOTANY 670 — ADAPTIVE RESTORATION LAB  
2 credits.

Field experience in restoration as an adaptive process involving field experimentation; baseline data collection on restoration sites; design of experiments to advance restoration science; quantitative evaluation of restoration outcomes. Analysis and interpretation of data; development of a team report.  
**Requisites:** a crse in ecology a crse in stats, or cons inst  
**Repeatable for Credit:** No  
**Last Taught:** Fall 2015

LAND ARC 671 — GEODESIGN FOR SUSTAINABILITY AND RESILIENCY  
3 credits.

This course explores the Geodesign concepts and analysis methods can support sustainability and resiliency. A brief history and development of the sustainability and resiliency movements establishes context, motivation and priorities for Geodesign. Characteristics of public participation frame the role of geodesign to engage and empower the community to plan for sustainability and resiliency. Discovery of issues, spatial data and analyses follows a conceptual and geographical trend from local to global scales and urban to rural localities. These include population density, land cover change, urban growth/sprawl, transportation, walkable neighborhoods, water resources, green infrastructure, landscape prioritization, carbon footprint analysis, and climate change. Geodesign approaches include measurement of indicators/metrics, resource management, cost/benefit analyses, and proximity measurements. Experience with these methods and data resources takes place in weekly laboratory/homework exercises throughout the semester.  
**Requisites:** LAND ARC 630 and LAND ARC 631 and admission to the Capstone Certificate in Geodesign  
**Repeatable for Credit:** No

LAND ARC 675 — HISTORIC PRESERVATION PLANNING FIELD WORKSHOP  
1-4 credits.

Identification of Wisconsin’s rural historic and cultural features and the planning alternatives available for their preservation and utilization. Lecture, lab and field.  
**Requisites:** Consent of instructor  
**Repeatable for Credit:** No  
**Last Taught:** Summer 2009

LAND ARC 677 — CULTURAL RESOURCE PRESERVATION AND LANDSCAPE HISTORY  
3 credits.

A survey of cultural resource preservation, landscape history and approaches to a more comprehensive framework for environmental management.  
**Requisites:** At least 2 courses in history or the social sciences, or cons inst  
**Repeatable for Credit:** No  
**Last Taught:** Spring 2015

LAND ARC 681 — SENIOR HONORS THESIS  
2-4 credits.

**Requisites:** Honors program candidacy  
**Course Designation:** Honors - Honors Only Courses (H)  
**Repeatable for Credit:** No  
**Last Taught:** Fall 2014

LAND ARC 682 — SENIOR HONORS THESIS  
2-4 credits.

Continuation of 681.  
**Requisites:** Honors program candidacy LAND ARC 681  
**Course Designation:** Honors - Honors Only Courses (H)  
**Repeatable for Credit:** No  
**Last Taught:** Spring 2015
LAND ARC 691 — SENIOR THESIS
4 credits.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2015

LAND ARC 692 — SENIOR THESIS
4 credits.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 1999

LAND ARC/ENVIR ST/SOIL SCI 695 — APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS IN NATURAL RESOURCES
3 credits.
Course has four components: 1) Detailed review of GIS concepts; 2) Case studies; 3) GIS implementation methods; 4) Laboratory to provide "hands-on" GIS experience.
Requisites: Land Arc/Envir St/Civ Engr 655 or GEOG/CIV ENGR/ENVIR ST 377 or cons inst
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC 699 — SPECIAL PROBLEMS-LANDSCAPE ARCHITECTURE
1-5 credits.
Requisites: Sr st and cons inst
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

LAND ARC 710 — THEORIES OF LANDSCAPE CHANGE
2 credits.
Theories of landscape change in the arts and sciences. Contributions of the scientific method and humanistic frameworks to major issues in landscape architecture.
Requisites: Graduate or professional standing
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC 720 — CRITICAL INQUIRY INTO LANDSCAPE DESIGN EXPRESSION
2 credits.
Normative design theory as it relates to historical and contemporary aesthetic expression in landscape design. Review of critical theory and meaning associated with a broad landscape architecture typology.
Requisites: Graduate or professional standing
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC 740 — RESEARCH IN LANDSCAPE ARCHITECTURE
3 credits.
Overview of research: Logic and language of the process, substantive issues, criticism of research literature, developments of detailed proposals.
Requisites: Grad st in land arch or cons inst
Repeatable for Credit: No
Last Taught: Spring 2017

LAND ARC/ANTHRO/ART HIST/DS/HISTORY 764 — DIMENSIONS OF MATERIAL CULTURE
4 credits.
This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: Graduate or professional standing
Repeatable for Credit: No
Last Taught: Fall 2017

LAND ARC 866 — SEMINAR IN NATURAL PLANT COMMUNITY RESTORATION AND MANAGEMENT
1 credit.
Student presentations on topics related to plant community management and restoration.
Requisites: Graduate or professional standing
Repeatable for Credit: No
Last Taught: Fall 2014

LAND ARC/URB R PL 920 — REGIONAL DESIGN WORKSHOP
2-3 credits.
Development and application of a systematic approach to analysis and design at macro- and micro-scales within a regional context.
Requisites: Graduate or professional standing
Repeatable for Credit: No
Last Taught: Fall 2012

LAND ARC 940 — GRADUATE SEMINAR
1-2 credits.
Individual research, group discussion and workshop covering selected problems relating to the environment and landscape architecture.
Requisites: Graduate or professional standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2017

LAND ARC 990 — RESEARCH
1-12 credits.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2017
LAND ARC 999 — INDEPENDENT STUDIES
1-3 credits.
Opportunity to explore concepts or issues of particular interest to the student.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017