

# LANDSCAPE ARCHITECTURE

# **Overview**

There is a need for a new kind of professional prepared to tackle the inevitable changes to coastal communities, urbanized rivers and vulnerable places that necessitate different patterns of co-habitation between nature and people.

The Landscape Architecture and Engineering program equips students to tackle these issues through education in three critical areas of knowledge: urban design and landscape, ecology and evolutionary biology sciences, and river and coastal science and engineering.

This interdisciplinary knowledge allows graduates to collaborate with different specialists while keeping the strengths of a comprehensive design education.

Learn more about the program here (https://landscape-engineering.tulane.edu/).

# **Programs**

 Dual Degree in Landscape Architecture / River-Coastal Science and Engineering, MLAN/MS (https://catalog.tulane.edu/architecture/landscapearchitecture/landscape-architecture-river-coastal-science-engineering-mlan-ms/)

# Courses

### LAND 6011 Floodscapes Studio (6)

This introductory studio introduces a range of tools, skills and concepts rooted in architecture, landscape architecture and engineering to equip students with the foundation for design work in riverine and coastal environments. The course will focus on methods for understanding, analyzing, and visualizing sites at an urban-water interface, and will culminate in developing volumetric-based design ideas for holding water in this specific urbanized context. Through this immersion in design-thinking with a focus on urban-water systems, students will learn to critically see, think, and design for new futures that embrace the performative capacity of landscapes for multiple social and ecological purposes.

#### LAND 6013 Building Belonging: Transitions into the Tulane School of Architecture and Built Environment (0)

This course is designed for students who join the landscape architecture program after the intro studio, providing them with a foundational understanding of Tulane studio culture and the expectations of architectural education. Through discussions and collaboration, students will receive an introduction into the school's culture of design thinking, critique processes, and effective time management in a studio environment. The course fosters an understanding of landscape architecture as a discipline while helping students integrate smoothly into the program and develop the skills necessary for success in future studios.

#### LAND 6021 Landscape and Engineering Design Studio: Coastal (6)

All along the Atlantic Ocean and the Gulf of Mexico, communities, industries, and ecosystems inhabit a perpetually transforming coastal landscape. Throughout the history of urban development, settlement patterns have denied the persistent dynamism and typically constructed upon these landscapes as if they were permanent. Barrier Islands, long thin, sandy islands aligned parallel to the shore are perhaps the most indicative of this tendency, as they are constantly eroding and growing in line with larger scale coastal dynamics. This studio introduces students to the underlying physical, chemical, and ecological processes that contribute to the dynamism of Louisiana's barrier island chains. Students will investigate and learn to design coastal landscapes at the extreme margins of constructability, proposing adaptation pathways and questioning current development practices that challenge the continuation of existing coastal communities.

#### LAND 6022 Landscape and Engineering Design Studio: Riverine (6)

This studio explores adaptive landscape design at the city-river interface, focusing on the impacts of climate change. Students will examine the dynamic relationship between rivers and urban systems, particularly in areas experiencing novel flooding patterns. This design studio also focuses on other various ways that climate change is affecting urban rivers, including increased flooding, droughts, and habitat loss, and how these changes influence the urban build environment. Using a small to mid-sized city's riverine landscape as a project location, students will develop designs that emphasize negotiation and adaptation with natural systems rather than control. Through critical reading, discussions, field observations, and research, students will gain a comprehensive understanding of urban-river interactions and learn to propose solutions for socio-cultural challenges along urbanized rivers.

#### LAND 6031 Streetscapes Design Studio (6)

This studio explores streetscapes as complex urban ecologies, focusing on their role in water cycles and microclimates. Students will examine the challenges and opportunities of designing these public spaces at the intersection of natural and human-constructed systems. The course is structured in three modules: site analysis using regional climate data, site observation through physical modeling, and design interventions with monitoring strategies. Students will learn to visualize climatic processes and atmosphere within the built environment using a multi-scalar approach. The studio includes an integrated eco-tech series on sensing, monitoring, construction details, and prototyping, aligned with each module's themes.



#### LAND 6032 Forest Urbanism and Waste Design Studio (6)

Urbanized territories are complex 'organisms' with an expansive, linear process of consumption and waste production. Through an exploration of regenerative systems—systems that not only recycle waste but use it to actively restore the systems they are a part of—this studio explores the vital role of plant and soil ecosystems in shaping the future of urban environments. Students will investigate design strategies emphasizing urban forestry and grassland ecologies to restore urban ecosystems, capture carbon, and create equitable spaces. The course covers urban planting techniques, ecological management, phytoremediation, composting, and biomass recycling. Students will calculate energy and biomass flows to understand their designs' impact on the city's carbon footprint. Through critical reading, discussions, field observations, and community engagement, students will gain insight into plant-urban environment interactions and learn to design regenerative urban landscapes that reduce the environmental impact of the built environment.

#### LAND 6051 Regional Climate Adaptation and Urbanism Research Studio (6)

This design research studio explores climate adaptation strategies for the Gulf Coast, focusing on innovative spatial planning. Facing a changed climate, a landscape impacted by ongoing land loss, and centuries of inequity and poor communities susceptible to ongoing environmental justice issues, this studio is conceived as advancing a vision for the Gulf Coast that grapples with oil legacy infrastructure, affected communities and their health and a changing coastline with ongoing environmental challenges. The goal of this interdisciplinary research studio is to help students understand how ecological and hydrological restoration, climate mitigation, and opportunities presented by the energy transition can combine across the territory in different sites and scales. Through reimagining practices, this studio also aims to expand the concept of Gulf Coast working landscapes that considers public health, equity, and labor practices. Students are expected to put forward multi-scalar scenario-based proposals to answer the following research questions: What will the Gulf Coast look like in 2050 with spatial strategies that embrace social and ecological improvements? What will the reduction of fossil-fuel energy consumption and increased opportunities for renewable energy production and carbon sequestration look like in the built environment at the regional, metropolitan, and architectural scales? What are the new economies that might emerge from these improvements that also support resilient and healthy communities and habitats?

#### LAND 6111 History of Landscape Architecture I (3)

This course is the first in a sequence of three courses of History of Landscape Architecture. The first course takes on a basic survey of the western culture. The second focuses of the different types of water infrastructure to sustain settlements and agriculture, and the third course focuses on contemporary practices of landscape architecture understood within their lineage. The survey for this first course covers the main western societal conceptions of nature that drove the transformation of the natural world. The course chronologically covers from the Roman Empire to the 1992 United Nations Conference "Earth Summit' in Rio de Janeiro. Based on selected case studies, the course provides an overview of the land transformations made by societies prior to human inhabitation. Emphasis is placed on the different professions that led these land transformations until the figure of the landscape architect emerges as a profession. From the military to surveyors, geographers, and gardeners to landscape architects in different traditions, the competencies have changed overtime.

#### LAND 6112 History of Landscape Architecture II (3)

This course is the second in a sequence of three courses of History of Landscape Architecture. The first course took on a basic survey of the western culture. The second focuses of the different types of water infrastructure to sustain settlements and agriculture, and the third course will focus on contemporary practices of landscape architecture understood within their lineage. This course covers the history of settlements and their relation to their hinterland with an emphasis on water infrastructure as the key element for their viability overtime. Organized as a survey with a selection of case studies chosen across different historic times, -western and non-western cultures- the series cover different settlement's scales from entire settlements and their hinterland to domestic gardens, and from 'indigenous practices' to contemporary times.

#### LAND 6113 History of Landscape Architecture III (3)

This course explores theoretical foundations and key texts in landscape architecture from the late 20th century to the present, examining the shift from modernist to contemporary approaches. Topics covered include changing conceptions of nature, ecology, and public space; the emergence of landscape urbanism and ecological urbanism; and new materialist and posthumanist perspectives on landscape design and theory.

#### LAND 6211 Landscape Building Technologies I (3)

This course provides an in-depth exploration of materials, water infrastructure, and the implementation and performance evaluation in landscape architecture and engineering. The first part of the course focuses on traditional landscape materials, their properties, applications, assemblies, and environmental impacts, including their carbon footprint, extractive costs, and potential for reuse or recycling. The course then examines gray and green water infrastructure, focusing on conveyance systems, innovative practices like stream restoration and bioswales, and water detention methods. A "One Water" approach to water quality is addressed through stormwater filtration, wastewater management, and potable water systems. The course concludes with practical aspects of landscape construction, including drawings, specifications, construction administration, and performance evaluation, teaching students to assess the effectiveness and sustainability of completed projects.



#### LAND 6212 Landscape Building Technologies II (3)

This course explores the construction, establishment, and adaptive management of ecological landscapes and nature-based engineering solutions. It covers sustainable material sourcing, soil preparation, planting techniques, and adaptive management for urban, upland/prairie, and water/ wetland environments. Case studies will be utilized to examine real-world applications of building strategies in various landscapes, including green infrastructure, urban trees, perennial meadows, fire-dependent ecosystems, living shorelines, and marsh restoration. The course integrates theoretical knowledge with practical field work, involving hands-on projects such as urban tree planting and wetland restoration. A coastal infrastructure field trip provides experiential learning in diverse landscape settings. Students gain a comprehensive understanding of this material through this integration of theory, case studies, and practical application.

#### LAND 6311 Digital Media I (3)

An introductory course to 3D digital media concepts and techniques with a focus on the fundamental aspects of the Computer Aided Design process. Framed by a general introduction to digital media theory, students will gain fluency in a variety of software applications for the purpose of expanding the design process in architecture and landscape. Specific emphasis is placed on the role of the computer as a tool for analysis, spatial investigation, and representation. Basic 3D modeling software (Rhino) and the Adobe Suite will constitute the majority of course content.

#### LAND 6312 Digital Media II (3)

Digital Media II emphasizes dynamic representations and storytelling strategies that go beyond traditional, static 2D visualizations. Building on the foundational skills acquired in Digital Media I and previous studio workshops, this course expands students' digital toolset to include new media, film, animation, and simulation. With a focus on different forms of time (longue durée, catalytic moments, non-linear and cyclic structures) and landscape dynamism, this course delves into techniques that prioritize communicating temporality, emergence, human experience, and the flow of materials and populations in built and natural environments.

#### LAND 6512 Professional Practices and Concerns in Landscape Architecture (3)

This course provides a comprehensive overview of professional landscape architecture practice, covering organization types, legal and ethical frameworks, and operational systems. It examines various practice models in the U.S. and abroad, focusing on organizational aspects including project management, delivery types, and client relations. Students will learn about project stages, risk management, codes, and team structures. The course covers business fundamentals such as marketing, proposal writing, contracts, and human resources. It also explores the future of practice, including post-pandemic workplace evolution, circular economy opportunities, and the integration of technologies like AI and virtual reality. Students will gain essential knowledge for successful professional practice in landscape architecture.

#### LAND 6560 Landscape Architecture Internship (3)

The Landscape Architecture Internship course provides students with an opportunity to reinforce and expand their skills and knowledge through professional internship experiences during the course of their studies.

#### LAND 6910 Independent Study (1-6)

The Independent Study course gives graduate students an opportunity to work with a faculty advisor to pursue a personal academic interest with greater focus. Qualified students must develop a syllabus and schedule with the help of the faculty advisor. The course must be approved by the Landscape Architecture Program Director prior to registration. Course may be repeated up to two times.

#### Course Limit: 2

#### LAND 6930 Special Topics (0-4)

Special Topics in Landscape Architecture. Course may be repeated unlimited times for credit.

Course Limit: 99

LAND 6931 Special Topics (0-4) Special Topics in Landscape Architecture. Course may be repeated unlimited times for credit.

#### Course Limit: 99

## LAND 6932 Special Topics (0-4)

Special Topics in Landscape Architecture. Course may be repeated unlimited times for credit.

#### Course Limit: 99

#### LAND 6933 Special Topics (0-4)

Special Topics in Landscape Architecture. Course may be repeated unlimited times for credit.

## Course Limit: 99

## LAND 6934 Special Topics (0-4)

Special Topics in Landscape Architecture. Course may be repeated unlimited times for credit.

#### Course Limit: 99



#### LAND 6935 Special Topics (0-4)

Special Topics in Landscape Architecture. Course may be repeated unlimited times for credit.

#### Course Limit: 99

#### LAND 6936 Special Topics (0-4)

Special Topics in Landscape Architecture. Course may be repeated unlimited times for credit.

#### Course Limit: 99

#### LAND 6937 Special Topics (0-4)

Special Topics in Landscape Architecture. Course may be repeated unlimited times for credit.

#### Course Limit: 99

#### LAND 6938 Special Topics (0-4)

Special Topics in Landscape Architecture. Course may be repeated unlimited times for credit.

#### Course Limit: 99

#### LAND 6939 Special Topics (0-4)

Special Topics in Landscape Architecture. Course may be repeated unlimited times for credit.

#### Course Limit: 99

#### LAND 6980 Thesis Research Methods (3)

Universities are places for knowledge acquisition and knowledge advancement. Different areas of knowledge come with associated research methods or modes of inquiry. After an introduction to the increased importance of research in the design profession, this class on Research Methods for this interdisciplinary master teaches a) How to formulate research questions, b) How to select appropriate research methods amongst the qualitative, quantitative, and experimental types of research methods available, and c) Have a basic understanding on how to conduct them. Designers of the built environment will be able to design a 'research plan' for elaborating grounded projects—chiefly in the thesis—to advance knowledge and make possible the flourishment of all members of society facing global warming challenges.

#### LAND 6990 Thesis Studio (6)

Thesis Studio, is a course in which graduate students in their final year develop and test a thesis addressing a significant issue in the built environment, overseen by a faculty thesis director. The final graduate thesis project is the culmination of the MLA-MSE curriculum and the capstone of research and design synthesis for students. Graduate students can choose to pursue a thesis project in their final year of study or may opt to take the research studio track. Students who elect to do an independent Thesis Studio must fulfill specific academic requirements and have prepared a thesis topic over the preceding summer and have approval for this proposal by a thesis director and graduate program director, and must take LAND-6980 in the fall semester to develop their thesis proposal before taking LAND-6990 Thesis Studio.

# LAND 8011 Advanced Standing (6)

Advanced Standing course: LAND 6011

LAND 8031 Advanced Standing (6) Advanced Standing course: LAND 6031

LAND 8032 Advanced Standing (6) Advanced Standing course: LAND 6032

LAND 8051 Advanced Standing (6) Advanced Standing course: LAND 6051

LAND 8111 Advanced Standing (3) Advanced Standing course: LAND 6111

LAND 8112 Advanced Standing (3) Advanced Standing course: LAND 6112

LAND 8113 Advanced Standing (3) Advanced Standing course: LAND 6113

LAND 8211 Advanced Standing (3) Advanced Standing course: LAND 6211

LAND 8212 Advanced Standing (3) Advanced Standing course: LAND 6212



LAND 8311 Advanced Standing (3) Advanced Standing course: LAND 6311

LAND 8312 Advanced Standing (3) Advanced Standing course: LAND 6312

LAND 8901 Advanced Standing (3) Advanced Standing course: elective

LAND 8902 Advanced Standing (3) Advanced Standing course: elective