

ECOLOGICAL DESIGN

This program is not currently accepting students.

OVERVIEW

Ecological Design is the process of integrating humans with the rest of nature in order to create a sustainable and desirable future. Ecological Design employs transdisciplinary integration, creative synthesis, and true participatory problem-solving to understand and resolve increasingly complex issues. The emphasis of the Certificate of Graduate Study in Ecological Design is on problem-based learning in ecology, engineering, natural resources, and community development. The approach is to develop applied and interdisciplinary solutions which integrate the ecological, social, economic, and built systems.

DEGREES

- Ecological Design CGS

Courses

NR 5450. Data Vis & Communication. 3 Credits.

Focuses on fundamentals and practice of data visualization and communication. Learn the ways humans use cognitive and perceptual abilities to comprehend information, best practices for creating compelling and effective data visualizations, and the many nuanced factors influencing the successful application of practices. Includes work with an existing research data set. Prerequisite: Graduate student or Instructor permission.

NR 5460. Geospatial Computation. 3 Credits.

Geospatial Computation is the study of general computational methods applied to spatial and spatiotemporal data for exploratory, confirmatory, descriptive or predictive analysis. Introduces foundational concepts applications in spatial data science within the context of GIS. Computational approaches in spatial simulation, exploratory data analysis, predictive analysis and geospatial data visualization. Prerequisite: Graduate student or Instructor permission.

NR 5990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

NR 6060. Envisioning a Sust Future. 2 Credits.

Seminar orienting Graduate students to RSENR and providing frameworks for collaborative leadership, whole systems thinking, and intercultural competency.

NR 6070. Applied Ecol., Env. & Society. 2 Credits.

Critically examines the process and ethics of science, including scientific reasoning, theory, hypotheses, and integration with experimental design, discovery, and ethics. Students will begin to form their professional networks and understand the historical and contemporary influences of professional networks on research and scholarship.

NR 6110. Leadership for Sustainability. 3 Credits.

Provides an experiential and theoretical orientation to foundational practices, principles, and skills of sustainability leadership with an emphasis on ecological/systems thinking, sustainability, and leadership.

NR 6120. Power Privlge & Catalyz Change. 3 Credits.

Focuses on leadership skills and systems frameworks for engaging with issues of diversity, power, and privilege and the implications of these topics on leaders' capacity. Designed to meet the Rubenstein School of Environment & Natural Resources graduate diversity requirement. Prerequisite: NR 6110.

NR 6391. Master's Thesis Research. 1-18 Credits.

Research for the Master's Thesis.

NR 6392. Master's Project Research. 1-12 Credits.

Research for the Master's Project.

NR 6410. Ecological Economic Theory. 3 Credits.

A transdisciplinary study of the economic system as embedded and interdependent on social institutions and environmental systems.

NR 6420. Ecosystem Services. 3 Credits.

Examines the economic and other benefits nature provides to people. Covers the ecological foundations of quantifying ecosystem services, the economics of valuing them, and the practical issues involved with putting them to work for conservation. Prerequisite: Instructor permission.

NR 6430. Fndmntls of Geog Info Systems. 0 or 3 Credits.

Concepts and methods in Geographic Information Systems (GIS) presented at an accelerated pace for Graduate students using ArcGIS software.

NR 6720. Transdisc Leadshp & Creatvty. 3 Credits.

Explores the theoretical and practice-based fields and lineages associated with transdisciplinary leadership and creativity while providing a solid structural and relational grounding for students in the Transdisciplinary Leadership, Creativity & Sustainability Doctoral Program.

NR 6730. Transdisc Mthds&Modes of Inqry. 3 Credits.

Focuses on practices for engaging with inquiry, methods, and practice as students develop more clarity about the research questions, practices, structure, methods, and lineages that will inform their dissertation proposal and research.

NR 6760. Graduate Teaching Practicum. 2 Credits.

Natural Resource teaching practicum for Doctoral students in the Rubenstein School. Course is required if students are following the academic option. Should be taken concurrently or one semester in advance of completion of the doctoral teaching requirement. Prerequisite: Doctoral student.

NR 6880. Ecological Leadership Seminar. 3 Credits.

Explores emerging topics and themes related to the theory and practice of ecological leadership. Can be taken in successive semesters (up to two times), as learning module topics will change.

NR 6890. Ecological Leadership Practicum. 3 Credits.

An advanced exploration of ecological/systems thinking, sustainability, leadership skills, and leveraging change; offering students the opportunity to integrate these concepts and skills through an applied leadership practicum. Prerequisite: NR 6880.

NR 6990. Special Topics. 1-18 Credits.

Graduate topics and material that may eventually develop into a regular course offering.

NR 6991. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

NR 6993. Independent Study. 1-18 Credits.

A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

NR 6995. Graduate Independent Research. 1-18 Credits.

Graduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

NR 7491. Doctoral Dissertation Research. 1-18 Credits.

Research for the Doctoral Dissertation.

NR 7740. Creative Practice & Dissertation. 3 Credits.

For Doctoral students nearing the end of dissertation research and beginning the integration, diffraction, synthesis, and meaning-making process essential to their dissertation. Provides structure, support and feedback in the creative act of crafting a dissertation. Prerequisites: NR 6720, NR 6730.

NR 7990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

NR 7991. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

NR 7995. Graduate Independent Research. 1-18 Credits.

Graduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.