



## Graduate Study in Design and Environmental Analysis

# Master of Science in HUMAN ENVIRONMENT RELATIONS

**Two-Year Graduate Program**

## CONCENTRATION: Sustainable Design Studies

There are many definitions for “sustainable” as it pertains to design. In the Department of Design and Environmental Analysis, “sustainable” is understood as going beyond maintaining the things we have, to retrieving the things we have lost. Through this broader, more challenging strategy for design, environmental damage related to the construction, operation, and decommissioning of the built environment not only can be lessened, it can be reversed. Design can be used as a healing enterprise, as a way to make things better. In today’s world of global environmental degradation, this new understanding of design has become an imperative.

This concentration is for students who are concerned about the roles they will play as professionals in degrading the biophysical world. The prime objective of this concentration is to develop a new worldview founded on a skeptical, critical approach to reasoning, a deep sensitivity for things living, and a broad understanding of the historical and cultural contexts of the human/nature relationship. The secondary objectives are to develop a deeper knowledge of environmental issues, construct conceptual frameworks for analysis of these issues and to demonstrate how ecological knowledge can be applied to design-related enterprises through research-based thesis projects.

More specifically, the Masters of Science concentration is for students interested in developing a deeper understanding of the social and physical science aspects of sustainable design. This could include studying green building systems and practices, sustainable planning and management of facilities, or ecologically beneficial behaviors regarding the built environment. Thesis topics have ranged widely and have included investigating the effects of post-secondary education on professionals involved with sustainability, comparing the energy performance of a “green Olympic speed skating oval with a conventional Olympic facility, and examining factors influencing green building practices in the northeastern US.

## CAREERS

Design professions are undergoing significant internal changes in response to the multitude of environmental crises that the planet is currently facing. Whether the pressures for “green design” are coming from the marketplace, legislation, or a sense of corporate responsibility, these professions are moving to become part of the solution rather than remain part of the problem. Graduate study in Sustainable Design Studies puts students on the leading edge of ecological design practice through a research-based graduate degree, giving them a significant advantage in firms moving towards greater environmental responsibility. Students develop an ecological literacy that blends critical thinking with environmental ethics, ecology with economics, and technology with policy. Through this concentration, students are prepared to become effective agents for change. Graduates of this program have found diverse positions in such organizations as Leo Daly Architects, DEGW Strategic Design Consultants, the US Green Building Council and Greenstar Australia.

## M.S. REQUIREMENTS/SUGGESTED COURSEWORK

The concentration in Sustainable Design Studies requires students to complete a foundation of core courses in ecological literacy with regards to design and construction, critical reasoning, environmental ethics and environmental history. Elective courses are selected in consultation with your graduate thesis committee and could be used to develop a minor area of study as well. Suggested courses vary considerably and students are encouraged to identify courses in addition to those listed that will enhance their focus of study.

<b>DEA field courses required or recommended:</b>			
DEA 1110	Making a Difference By Design	<i>Recommended</i>	3 credits (audit)
DEA 1200	Art+Science: Sustainability, Multiculturalism, and Transdisciplinarity	<i>Recommended</i>	3 credits (audit)
DEA 1500	Introduction to Environmental Psychology	<i>Recommended</i>	3 credits (audit)
DEA 2550	Design Strategy and Management	<i>Recommended</i>	3 credits (audit)
DEA 3700	Design Methods	<i>Recommended</i>	3 credits (audit)
DEA 4500	Policy Meets Design: High-impact Facilities of the 21 <sup>st</sup> Century	<i>Recommended</i>	3 credits (audit)
DEA 7100	DEA Graduate Pro Seminar	<i>Required</i>	*1 credit ( <i>*each semester</i> )
DEA 6200	Studies in Human-Environment Relations	<i>Required</i>	3 credits
DEA 6100	Studies in Design Thinking	<i>Required</i>	3 credits
DEA 6550	Healthcare Innovations	<i>Recommended</i>	3 credits

<b>Required Foundational Courses for Concentration:</b>		
DEA 4220	Ecological Literacy and Design	3 credits
DEA 6250	Human Dimensions of Sustainable Building	3 credits
BSOC 2061/PHIL 2460/STS 2061	Ethics and the Environment	4 credits
<b>One of the following:</b>		
ASTRO 4490	Senior Seminar Critical Thinking	4 credits
ILRLR 2300	Argumentation and Debate	3 credits

<b>Suggested Electives:</b>		
ALS 4770	Environmental Stewardship in the Cornell Community	3 credits
ARCH 6601/ ARCH 6602	Environmental Systems II-Thermal Environmental Systems / Environmental Systems III - Lighting and Acoustics	3 credits/ 3 credits
BEE 4870	Sustainable Bioenergy Systems	3 credits
CRP 4440	Resource Management and Environmental Law	3 credits
NBA 5190	Sustainability as a Driver for Innovation in the Entrepren. Org.	1 credit

<b>Research &amp; design methods courses: (choose 1 research method, 1 design method)</b>		
DEA 6500	Problem-Seeking through Programming (design method)	4 credits
DEA 6560	Research Methods in Social Sciences	4 credits
Various	Statistics Courses	4 credits

<b>Facility Planning, Design, and Management: (choose 1 course)</b>		
DEA 3530	Planning and Managing the Workplace	3 credits
DEA 5540	Workplace Strategies Studio	4 credits

<b>Behavior &amp; social responsibility courses: (choose 1 course)</b>		
DEA 6520	The Ambient Environment	4 credits
DEA 6610	Environment and Health *Offered spring semester of even years, i.e. '12, '14, '16, etc	4 credits

<b>Thesis course:</b>		
DEA 8990	Master's Thesis	8-12 credits

<b>Summary of Curriculum</b>	<b>Number of Courses</b>	<b>Total Credits</b>
<b>Required DEA field courses</b>	3	10 (6 +1/ semester)
<b>Required Foundational Courses</b>	4	16
<b>Suggested Electives</b>	2-3 (as required)	6-10
<b>Research &amp; design methods courses</b>	2	8
<b>FPDM Courses</b>	1	3-4
<b>Behavior./Social Responsibility courses</b>	1	3-4
<b>Master's Thesis *</b>	1-2	8-12
<b>Total Courses 15-17</b>		<b>Total Credits: 54-64</b>

\* Thesis credits are determined at the discretion of the thesis committee; the number of courses and credits listed merely indicate typical range.

**NOTE:** A minimum grade of B- is required for courses taken within the major.