

SUSTAINABLE ENVIRONMENTS

Master of Design in Sustainable Environments

The Master of Design in Sustainable Environments (M.Des.S.E.) is an advanced interdisciplinary degree that focuses on holistic design strategies for the production of sustainable, resilient environments and artifacts. MDesSE Students and faculty constitute a highly interactive multi-disciplinary community that is deeply engaged in understanding, promoting and conceiving sustainable practices in design, planning and artistic production. Students engage in faculty-led research projects and are challenged to develop individual sustainable design strategies for issues of current relevance that conserve resources, ameliorate ecological problems and promote social, political and economic justice.

Coursework focuses on developing skills in modes of representation and information dissemination, foundational and emerging theoretical discourse, research methods and design interventions. The degree concludes with an integrated capstone experience through a student-defined thematic project. Capstone projects are situated in different parts of the world and include themes such as:

- addressing the impact of climate change on communities and the built environment;
- integrating informal economies within contemporary modes of urbanization;
- developing strategies to reinvigorate waterways and enhance water quality;
- integrating waste as a resource in contemporary infrastructures; and
- rethinking disaster mitigation processes that promote resilience, social equity and expedited relief.

The Master of Design in Sustainable Environments degree consists of 35 credits, typically distributed over three semesters (fall, spring and summer); however students may choose to distribute these credits over four or five semesters. The degree is geared toward students with professional degrees in art (BFA, MFA), architecture (BArch, MArch), Graphic Design (BFA, MFA), Interior Design (BFA, MFA), Industrial Design (BID, MID), landscape architecture (BLA, MLA), planning (BSCR, MCRP, MUP) or Engineering. Graduate students can also pursue the following double degrees in the College of Design: M Arch/MDesSE, MCRP/MDesSE, MFA in IVA/MDesSE and MLA/MDesSE.

Courses primarily for graduate students, open to qualified undergraduates:

SUS E 501: Sustainable Design Studio I

(0-10) Cr. 5.

Prereq: SUS E 521

Addressing sustainable design at multiple scales of constructed and natural systems and artifacts, this studio engages multidisciplinary graduate students in a team-oriented, project-based learning environment. Faculty-directed projects will include theoretical investigations and applications of an interdisciplinary design process through brief readings and discussions.

SUS E 502: Sustainable Design Studio II

(0-10) Cr. 5.

Prereq: SUS E 501, SUS E 512, SUS E 531

This advanced studio provides a community-based context for an interdisciplinary design team to work on a variety of faculty-directed projects including funded, basic, and applied research. Coursework addresses sustainable design at multiple scales, engaging both systems and artifacts. Field trips.

SUS E 511: Sustainable Design Colloquium I

(3-0) Cr. 3.

Prereq: Admission to MDSE program

Study and discuss practices of sustainable design and design research. Investigate responsibilities, roles, technologies and methods for studying and advancing the art and science of designing sustainable environments.

SUS E 512: Sustainable Design Colloquium II

(1-0) Cr. 1.

Prereq: SUS E 511

A graduate student-led seminar designed to foster the knowledge and skills to support innovation, entrepreneurship, and leadership in the field of sustainable design. Invitation of outside speakers.

SUS E 513: Sustainable Design Colloquium III

Cr. 3.

Prereq: Sus E 540, Sus E 502

Research expands and integrates findings from the prerequisite courses. Students develop independently-defined research to produce a comprehensive and conclusive written document.

SUS E 521: Foundation of Sustainable Design

(3-0) Cr. 3.

Prereq: Graduate standing or senior classification with instructor permission.

Introduction to the broad frameworks and tools for implementing sustainability among a variety of environments, industries, and enterprises. Investigates the role and opportunity for sustainable design strategies.

SUS E 531: Human Dimensions of Sustainability

(3-0) Cr. 3.

Prereq: Graduate standing or senior classification with instructor permission.

This seminar provides students from multiple disciplines with a grounding in designers' interactions with clients, consumers, communities, cultures, and biospheres. Through a review of literature and the production of new case studies in sustainable design, students discover and represent conditions in which products of design operate across scales, markets, social conditions, geographic domains, academic disciplines, and zones of professional responsibility.

SUS E 540: Methods for Sustainable Design

(3-0) Cr. 3. S.

Prereq: senior or graduate standing.

Overview of qualitative, quantitative and design research methods. In-depth application of methods relevant to capstone project proposal development (SUS E 502). Proposal must address research questions, articulation of research methods and preliminary findings grounded within contemporary theoretical discourse on Sustainable Environments.

SUS E 550: Making Resilient Environments

(Cross-listed with C R P). (3-0) Cr. 3. S.

Prereq: senior or graduate standing.

Major theories and ideas revolving around the concept of resilience. Assessing the social and political processes associated with policy making for resilience. Application of the concept of resilience in order to understand and evaluate environments. Evaluate the different approaches toward resilience and develop an understanding of the relationship between sustainability and resilience. Case studies of communities that proactively prepare for, absorb, recover from, and adapt to actual or potential future adverse events.