Urban Sustainability

**URS 5010. Urban Sustainability. 6 Units.**
This course provides the foundation for the Urban Sustainability Master program by explaining how to view and analyze the City from an ecological perspective, and providing examples of how sustainability can be applied to plans, policies, and projects in both existing and future urban areas. The goal is to present and analyze concepts, theories, and questions that will enable the student to define, practice, advocate for, and think critically about urban sustainability. This course incorporates urban ecosystem science, human/social ecology of urban places, and urban environmental history. In that context, first-semester students will explore and critique applications of sustainable practice.

**URS 5020. Research Methods. 3 Units.**
This course is designed to provide a broad investigation of social science and urban ecosystem science research methods and design, including various quantitative and qualitative research methods with more emphasis placed on the latter, in particular action research. Students will scrutinize, interrogate, and critique the methods and findings of the authors whose work they are reading. The emphasis will be on students becoming strong consumers of research, having the ability to read and evaluate quantitative and qualitative research in both social sciences and field sciences. Students will be given practical tools in this course, concentrating on field methods that will equip them to collect, analyze, and interpret data. The course will enable students to read, critique, and contribute to the existing literature. Students will have the option to engage in research projects of their own design as it fits their fieldwork and capstone projects. Students will work directly with faculty who can guide them in the knowledge acquisition required to be successful in these pursuits.

**URS 5030. Eco-Systems Thinking. 6 Units.**
This course will engage students in the study of systems theory as a lens to examine planning, policy, mediation, facilitation, activism, and advocacy in the urban ecosystem. Students will extend their consideration of urban sustainability by building on the theoretical foundations developed in the first semester’s Urban Sustainability course. From these explorations of sustainable practice students will now examine and critique political and social systems and environmental infrastructure and the extent to which decisions have cascading/and or radiating effects that have implications for all of the system’s component parts. The course will address how and where urban development occurs and how this affects ecosystem quality and services, habitat protection, water resources, energy consumption, indoor and outdoor air quality, and the overall quality of life and health of urban residents. Students will analyze the impact of these factors in the context of international development as urban populations grow rapidly across the globe. This course compares new and established ideas in urban sustainable practices and infrastructure. Focus will be on the agencies and organizations that regulate and make policy on the urban sustainability issues and how to effect change. Students will practice mediation, facilitation, conflict resolution, and strategic planning skills in the context of this class.

**URS 5040. Sustainable Urban Economies. 3 Units.**
This course focuses on the field of sustainable urban economy through theoretical and practical investigations into environmental solutions in economics, green business, and community engagement. Topics will include analysis of the scholarly literature and discussions of the interrelationship between international and local economies. Students will analyze sustainable economic ideologies and practices, a broad range of community perspectives, civic requirements, as well as geographic, built environment, capital and natural resource concerns. Students will examine and critique sustainable economic practices, programs and policies in the public, private and non-profit sectors.

**URS 5100. Fieldwork Planning. 1 Unit.**
Prerequisite for students engaging in fieldwork. Part 1: Introduction to Fieldwork Students will learn about various approaches to fieldwork through readings and discussions. These conversations will begin at the first residency and continue through the initial project period, during which time students will become familiar with the expectations of a fieldwork project. Faculty mentors will guide students through this orientation to fieldwork. Part 2: Fieldwork Planning Seminar During their second residency, students will work in groups supervised by mentoring faculty to begin designing their own field studies. Throughout the project period, faculty will guide students through the planning of their fieldwork projects, helping students articulate their learning objectives and solidify their obligations to their fieldwork sites. Throughout the project period, faculty will provide and foster a support network as students interact online to finalize their fieldwork plans.

**URS 5110. Fieldwork. 2 Units.**
Building on the work completed in the Introduction to Fieldwork and Fieldwork Planning Seminar, students will engage in their actual fieldwork projects. During that time, students will be in contact with each other and their mentor in a seminar format.

**URS 5220. Research and Writing for Practitioners. 3 Units.**
This course is designed to provide a broad investigation of social science and urban ecosystem science research methods and design, including various quantitative and qualitative research methods. Students will be given practical tools in this course, concentrating on field methods that will equip them to collect, analyze, and interpret data. The emphasis will be on students becoming strong consumers of research, having the ability to read and evaluate quantitative and qualitative research in both social science, and environmental and related field sciences. This course will rely on real-world examples through collaborations with individuals working on issues that are important to achieve urban sustainability. No prior knowledge of methodology or statistics is expected or assumed. Basic statistical methods will be covered in this class that will enable students to read, critique, and contribute to the existing literature. The course will use literature from the field of Science and Technology Studies (STS) to form a critical basis for engaging with qualitative and quantitative data. During the semester, we will explore three interrelated dimension of research, one focused on the theoretical foundations of science and research, another focused on the various methods available to researchers for data collection and analysis, and finally we will complete exercises in the practical application of various research methods. Course Learning Objectives Students in this course will be able to: ? Critique competing approaches to research design and methods, and their philosophical differences. ? Make informed choices regarding research and design methodologies for the questions they seek to answer, and to judge and evaluate the quality of projects and their chosen methodologies.
URS 5230. Eco Systems Thinking. 3 Units.
As the dual crises of rampant inequality and climate change threaten the future of democracy and the future of our planet, Einstein's notion that We can't solve problems by using the same kind of thinking we used when we created them becomes the challenge of the day. Today's problems demand unprecedented reservoirs of human creativity, divergent thinking, and empathy as well as a heightened tolerance for complexity. Eco-systems thinking -- a way of seeing the world as a complex web of interconnected parts -- is a skill that helps us see patterns in relationships, view a problem through many perspectives, and identify leverage points for intervention. Coupled with a deep practice of collaborative experimentation, eco-systems thinking can help us get better at learning so that we can build more effective frameworks and strategies for solving our most intransigent urban problems. The purpose of this course is to sharpen our capacity for eco-systems thinking and creative problem solving at the same time that we build fundamental professional skills.

URS 5240. Urban Infrastructure. 3 Units.
This course will explore the mechanics and implications of urban infrastructure and the urban metabolism to include topics such as: energy, water, transportation, housing, waste, food, land use and the built environment; while considering efficient and equitable delivery, distribution and ownership. Students who complete the course will be able to: Comprehend and evaluate the conventional large-scale, resource-intensive industrial-era design infrastructure model. Challenge and change the model by applying of new methods that use bio-mimicry and ecological systems design to produce smaller scale, distributed alternatives that are less resource-intensive. Compare and analyze theories and strategies that promote equitable access, greater efficiency, and integration at the urban scale.

URS 5500. Prior Learning: Urban Sustainability. 2-2.67 Unit.
URS 5960. Independent Learning. 1-5 Unit.

URS 6100. Capstone Part A. 3 Units.
The Capstone is a year-long comprehensive project in which students apply the integrated learning of social, economic and scientific perspectives through the overarching lens of natural systems thinking, in order to demonstrate the habits of mind, breadth of knowledge, practitioner skills and social justice perspective that comprise the mission of the University and the program. With the vision of a larger matrix or network of systems that function interdependently, students will address a problem or initiative within the student's town, city, business, community or country. Under the mentorship of a faculty member, students design, create and record the process of a significant project on paper with sample components that have been tested in the field. Projects can be done by individuals or teams, and innovation is encouraged. The seminar component will keep students in contact with each other and their mentors through online conferencing as well as class and individual meetings during the residency. Students complete their capstone projects and prepare for presentation during the final residency of the program. The final semester requires a significant amount of time working with mentors and team members to complete approved projects and prepare all necessary deliverables.

URS 6110. Capstone Part B. 6 Units.
The Capstone is a year-long comprehensive project in which students apply the integrated learning of social, economic and scientific perspectives through the overarching lens of natural systems thinking, in order to demonstrate the habits of mind, breadth of knowledge, practitioner skills and social justice perspective that comprise the mission of the University and the program. With the vision of a larger matrix or network of systems that function interdependently, students will address a problem or initiative within the student's town, city, business, community or country. Under the mentorship of a faculty member, students design, create and record the process of a significant project on paper with sample components that have been tested in the field. Projects can be done by individuals or teams, and innovation is encouraged. The seminar component will keep students in contact with each other and their mentors through online conferencing as well as class and individual meetings during the residency. Students complete their capstone projects and prepare for presentation during the final residency of the program. The final semester requires a significant amount of time working with mentors and team members to complete approved projects and prepare all necessary deliverables.

URS 6120. Fieldwork. 3 Units.
Building on the work completed in the Introduction to Fieldwork and Fieldwork Planning Seminar, students will engage in their actual fieldwork projects. During that time, students will be in contact with each other and their mentor in a seminar format.

URS 6200. Adaptive Leadership for Sustainable Change. 1 Unit.
This 1-unit course offers an introduction to the practice of adaptive leadership, with a specific focus on applying student learning to change initiatives in progress through Fieldwork and Capstone experiences. In this course, students will be introduced to ways of thinking, ways of being, practical tools, and implementable tactics that will develop and enhance leadership effectiveness in service to mobilizing greater progress on important issues.

URS 6210. Greenhouse Gas Emissions Inventories. 1 Unit.
A greenhouse gas emissions inventory is an accounting of greenhouse gases (GHGs) emitted to or removed from the atmosphere over a period of time. An inventory is usually the first step taken by entities that want to reduce their overall environmental footprint. This course will teach the basics of climate science and GHG accounting, and illustrate the possible options a corporation or organization might consider in the design of a GHG inventory. As an applied skills course, participants will employ GHG inventory tools and techniques to complete a GHG inventory for a constructed case project.

URS 6220. Radical Cartographies: Mapping for Social Justice. 1 Unit.
URS 6230. Funding Your Mission: Grant Writing. 1 Unit.
1-unit course will introduce students to fundraising for a 501c3 non-profit organization, with a focus on grants and grant writing. The entire grant cycle will be covered, including research, grant applications, letters of inquiry, proposals, and grant reporting. Students will write on behalf of an existing organization and complete a full grant application. Students also will learn about the components of a diverse contributed income portfolio, various types of campaigns, and laws and ethics related to fundraising.

URS 6240. Science for Urban Sustainability. 1 Unit.
URS 6250. Group Facilitation. 1 Unit.
This one unit class will introduce the students to the knowledge, skills and attributes needed for effective group facilitation. Students will focus on group dynamics and processes and the role and skill of a facilitator. Facilitators help groups make decisions, manage conflict, help build positive and productive relationships among the group members and get things done. This class will provide the students with a solid overview of group phenomena based both on theory and application. The class will explore elements of effective groups, the role of the facilitator, and group dynamics. The question of what makes an effective group or team is at the core of this class.

URS 6260. Practical Map Making. 1 Unit.
The course is organized around three smaller projects, and a final project which will draw on all of the skills gained in completing the first three projects. Each project includes online research into ways that cartographers represent data, discussion on the online forum, and the use of GIS and drawing software to represent geographic information. Through the course projects, students confront realistic problem scenarios that incorporate such skills and concepts as creating symbolization schemes, dealing with map projections, creating terrain representations, classification schemes, multivariate representation and representation of data uncertainty. Those who successfully complete the course are able to design and produce effective reference and thematic maps using GIS software, and can interpret and critique maps and related information graphics.

While non-profits have traditionally treated online channels like electronic megaphones, effective virtual communication is rooted in listening and engagement. In social change work our goal is to build power and movements. Online communications can support that goal by establishing a federated sense of ownership in movement dialogue and action. The purpose of this course is to build student understanding and experience of ways effectively to align an online communication campaign with the goals and aspirations and activities of their campaigning and advocacy work. This course will expose students to methods and strategies for creating an effective online communication campaign to advance social change activities. Towards this end, each student will: ? choose a topic/issue/product upon which to base their campaign ? learn how to build a story narrative with a particular audience(s) in mind ? learn how to advance that story over time and through various communications channels to engage and involve the target audience(s) Through the process of building a comprehensive/articulated communication plan students will leave the course with an understanding of: ? how to effectively coordinate use various online communication channels (Facebook, email, Twitter, etc.) ? how to evaluate the effectiveness of their messaging with available analytics tools and by listening for results and propagation of messages. ? how to build a calendar and workflow for responsive two-way communication with large diverse audiences.

Story has become a major arena of struggle in the current era. More and more, campaigns for social change and organizers for human rights and justice are recognizing the need for more sophisticated strategy around developing story and making meaning within their mobilizations, actions, campaigns and movement building work. This is a 1-unit course designed to provide students with an introduction to the basic tools for developing story-based strategy into social change work and the opportunity to apply them to real working campaigns, organizations, ideas and social movements.

URS 6290. Introduction to Environmental Journalism. 1 Unit.
This 1-unit course is a practical introduction to environmental journalism, which has an impact on open space, wildlife and humans and in many ways creates public agenda about the environment. It will help you find and develop story ideas, gather information and view issues from many different perspectives to produce fair and accurate articles. Just as in media newsrooms, we will discuss story ideas, as well as our successes and failures in previous assignments. A guest speaker involved in current environmental issues will help provide you with a better understanding of the complexities of real-life controversies, and of possible career opportunities. You are expected to be aware of major environmental issues of the day in your region, and keep track of environmental coverage in leading publications such as the Los Angeles Times and New York Times, and in research publications for environmental writers: Science and Nature. Your grade will be based on class participation, news judgment, clarity, accuracy, balance and the ability to meet deadlines.