Spring 2013
Environmental Studies Course Catalogue

Environmental Studies Program, The New School
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Updated 13 Nov 2012

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I. DEGREE REQUIREMENTS

Completion of the BA degree in Environmental Studies (ES) requires the successful completion of 16 courses, distributed as detailed below. The BS degree includes all of the following requirements plus three additional studio courses (an additional 18 credits).

COURSE DETAILS	OFFERED IN
• **Introduction to the Field**	
o UENV 2000 Environment and Society	Fall/Spring
• **Ecology Courses**	
o UENV 2400 Principles of Ecology	Fall
o UENV 3400 Urban Ecosystems	Fall
• **Design Courses**	
o PSDS 1601 Ecological Communication Design	Fall
o PSDS 2602 Material Ecological Impacts	Fall
o PSDS 2610 Sustainable Design Thinking	Spring
• **Chemistry Course**	
o LSCI 2051A Chemical Narrative of a Cell	Spring
• **One Science Laboratory Course**	
o UENV 3450 Ecology Lab	Spring
• **Quantitative Reasoning course:**	
o LMTH 2050 Math Models in Nature	Fall/Spring
• **One Statistics OR One Calculus Course, selected from the following:**	
o LMTH 2030 Statistics with SPSS	Fall
o LMTH 2040 Calculus	Fall/Spring
• **Mapping/GIS course:**	
o NINT 5380 GIS for International Crises, Development, and the Environment *Recommended	Spring
• **One Economics course, selected from the following**:	
o LECO 2050 Environmental Economics *recommended	Spring
o ULEC 2020 Introduction to Macroeconomics	Spring
• **Elective courses**	
o **One Social Science elective related to Environmental Policy, selected from the following:**	
o UENV 4704A Urban Agriculture & Food Activism	Spring
o UENV 2500A History & Literature of US Environmentalism	Spring
o UENV 4703A Social Justice in Food System	Spring
• **Senior Internship**	
o UENV 3900 Senior Internship/Fieldwork Experience	Summer/Fall
• **Senior Thesis and Capstone Courses**	
o UENV 4210 Directed Research: Research Methods (Pre-Thesis)	Fall
o UENV 4211 Directed Research (Thesis)	Spring
o PSDS 4110/1 Portfolio Lecture & Workshop	Spring

REQUIREMENTS FOR BS DEGREE

• **Bachelor of Science Design courses**	
o PSDS 3601 Sustainable Business	Fall
o PSDS 3602 Sustainable Everyday Practices	Spring

The Environmental Studies Bachelor of Arts (BA) program offers two concentrations in Urban Ecosystems (UE) and Environment, Society, and Public Policy (ESPP). Students must complete three courses that are 3000 level or upwards in a selected concentration to receive credit. If enrolled in the Bachelors of Science (BS) program, students must fulfill Sustainable Design requirements including UENV 3600 and 3610. BS students are encouraged, but not required to choose a concentration.

Please note that alternative courses offered within the consortium (those offered at New York University, Columbia University, or The Graduate Center at CUNY) may be counted towards your degree requirements. Your advisor must first review syllabi and approve the course. Speak to your advisor for more information.

II. REQUIRED COURSES

REQUIRED COURSES FOR BACHELOR OF ARTS (BA) & BACHELOR OF SCIENCE (BS) PROGRAMS

CORE REQUIREMENTS

INTRODUCTION TO THE FIELD

Environment and Society | UENV 2000A *RECOMMENDED

Note: Open to all NSU bachelor level students
Spring: 15 weeks. TR 10:00A – 11:40A, beg. Jan 29, 2013.
P. Timon McPhearson & Peleg Kremer
The state of the air, water, and soil climate change, habitat conversion, invasive species, biodiversity decline, deforestation, overfishing, and many other environmental issues are at the core of most of our pressing economic, social, political and human health concerns. This course examines the roots of the modern environmental crisis, reviewing the most current environmental issues and the underlying science for a critical look at how societies have interacted with the natural environment past and present and requirements for a sustainable future. The course consists of small group discussions, readings and case studies. (4 credits) **Spring CRN:** 4733

SUSTAINABLE DESIGN

Sustainable Design Thinking | PSDS 2610A

Offered in: Spring
15 weeks. W 12:10-1:25, F 12:10-2:50P, beg. Jan 30, 2013.
Faculty TBA
In this course, you will learn about "design thinking" (the collaborative creative research and processes used by designers), and how to apply "design thinking" to environmental behavior change in the context of city living. Can design contribute to the creation of more sustainable futures? In addressing this question, this course critically explores some of the legacy of sustainable design while also applying design thinking to the creation of more sustainable ways of living. In the studio, students learn a range of co-design research and ideation methods (such as problem reframing, unobtrusive and participant observation, long qualitative interviewing, visual analysis, cultural probes, idea generation, scenario-based designing, low-fi prototyping, bodystorming) and apply them to understanding and then responding to unsustainable aspects of contemporary urban living. Using previously learned visual communication design skills, students will create rich and insightful information visualizations and installations addressing the ecological impacts of contemporary urban living--both visible and not, and will innovate ways of making lifestyle changes that will enhance sustainability. (3 credits) **Spring CRN:** 6204

CHEMISTRY

Chemical Narrative of a Cell | LSCI 2051A

Offered in Spring
15 weeks. TR 3:50P – 5:30P, beg. Jan 29, 2013.
Faculty TBA
Through a narrative and visual journey, the course will discuss fundamental chemical principles and apply this understanding to appreciate the details of a cell at the molecular level. We will explore the underlying chemistry that lead from atom to the assembly of important complex macromolecules, such as DNA and proteins. The course will use visual representations and imaging to present chemical phenomena, to help make the unseen seen, and to help students understand, describe and study the building blocks of life. Assignments will incorporate film, animation and visualization exercises to further demystify chemical principles, structures and reactions. (4 credits)

Spring CRN: 7394

SCIENCE LABORATORY

UENV 3450A | Ecology Lab *RECOMMENDED

Spring: 15 weeks, TR 2:00P – 3:40P, beg. Jan 29, 2013.
P. Timon McPhearson
Note: Principles of Ecology is a prerequisite for this course.

Ecology LAB is a laboratory course designed to teach ecological research methodologies including experimental design and analysis in a laboratory setting while examining theoretical questions important in both rural and metropolitan sites. The nature of ecological science is interdisciplinary and the nature of urban ecology more so. Therefore this course, by necessity, links empirical science with theory to explore ecology generally and urban ecology specifically. This will not be a standard laboratory course. Rather, you will design a meaningful research project that can be done in the course of the semester using proven microcosm scale designs to build multi-trophic ecological communities to test ecological theory. A major goal of this course will be to help you gain comfort with science as a process, with ecology as a science, and with laboratory methods of analysis. (4 credits) **Spring CRN:** 6146

QUANTITATIVE REASONING

Math Models in Nature | LMTH 2050A *RECOMMENDED

Offered in: Fall/Spring
15 weeks. MW 11:55-1:35P, beg. Jan 28, 2013.
Jennifer Wilson
Instructor TBA

This course combines aspects of quantitative reasoning and mathematical modeling. Quantitative reasoning enables us to make sense of numbers – to find patterns, to estimate – and thereby to create mathematical models that help us make informed decisions. The focus in this course is particularly on the use of difference equations to describe complex natural phenomena. Using spreadsheets as computational and graphical aids students develop the algebraic, computational, graphical and statistical skills necessary to understand mathematical models. They learn why difference equations are the primary tools of the emerging theories of chaos and complexity. (4 credits) **Spring CRN**: 4403

STATISTICS AND CALCULUS COURSES CALCULUS

Statistics with SPSS
LMTH 2030A
15 weeks. MW 1:50P – 3:30P, beg. Jan 28, 2013
Spring CRN: 4405

*RECOMMENDED Section for ES students
LMTH 2030B
15 weeks. MW 10:00A – 11:40A, beg. Jan 28, 2013
Spring CRN: 5157

This course is an introduction to statistics using the software package SPSS. Emphasis is on exploring quantitative data and applying concepts to a range of situations. Topics include descriptive statistics, basic probability, normal distributions, correlation, linear regression, and hypothesis tests. The course combines lectures, discussions, and computer assignments. During the semester, students meet at a computer lab to learn specific software skills. Students are expected to go to the lab on a regular basis to complete homework assignments and explore the functionality of SPSS. This course fulfills the second math requirement for the IS major, is a requirement for the ES major, and is taught Fall & Spring. (4 credits)

Calculus | LMTH 2040A

Offered in: Fall/Spring
15 weeks. MW 10:15-11:30A, beg. Jan 28, 2013.
Marla Sole

An introduction to differential calculus: topics include limits, continuity, derivatives of algebraic and exponential functions, applications of the derivative to maximization, and related rate problems. The principles of calculus are applied to business and economic problems. (3 credits) **Spring CRN:** 4404

MAPPING/GIS COURSE

GIS for International Crises, Development, and the Environment | NINT 5380

15 weeks. M 8:00P – 9:50P, beg. Jan 28, 2013.

Stephen Metts

This course provides an introduction to desktop and web-based GIS software via real-world scenarios and research questions in humanitarian relief, international development, and environmental issues. In particular, students will learn to analyze, map, and publish spatial information using powerful GIS tools. Students will develop skills in web and paper-based cartography, collaborative online mapping, spatial data analysis, mobile phone data collection, and using and manipulating satellite and aerial imagery. (3 credits) **Spring CRN:** 7628

ECONOMICS

Environmental Economics | LECO 3040A RECOMMENDED

Offered in Spring

15 weeks. TW 10:00-11:40A, beg. Jan 29, 2013.

Unurjargal Nyambuu

This course aims at equipping students with economic methods and tools necessary to analyze current environmental issues. It examines theoretical analysis with discussion of a broad range of topics in environmental and natural resource economics. The course presents methodological issues and evaluation of environmental policy. It discusses cause of environmental problems e.g. market failure, property rights, policy failures, and reviews the welfare economics concepts including economic efficiency and market in terms of benefits and costs. We will examine Neo-classical and Ecological views on sustainability. This course also covers particular issues of current interest such as promotion of clean energy, transition to a greener economy and its social dimensions with specific emphasis on green economy and its implications for labor markets. Topics such as an introduction to ecological economics, climate change, water and air pollution, resource depletion, externalities, the economic critique of growth, the potential for government failure, incentive-based regulations, and opportunities for sustainable development are examined. (4 credits) **Spring CRN:** 7489

Introduction to Macroeconomics | ULEC 2020

Offered in: Spring

Notes: Students must choose a discussion section as well (ULEC 2021)

15 weeks. W 8:30–9:45A, beg. Jan 30, 2013.

Instructor TBA

This course introduces macroeconomic theory in economics, and analyzes how the 'economy in the aggregate' behaves. It focuses on how production, employment and prices are determined in advanced industrial capitalist nations, and explores how these macroeconomic variables determine economic prosperity of a nation over the long run (growth), and what happens when they fluctuate in an unexpected manner (leading to economic crisis). The course is divided in four parts. Part 1 examines how aggregate economy is measured in terms of output, income and employment, and examines the interrelationship between these variables. Part 2 focuses on the issues of aggregate production, and analyzes the process of growth and economic prosperity of a nation. Part 3 focuses on the issues of aggregate exchange and the role of money, and analyzes how aggregate prices are determined in the market. Part 4 focuses on the issues of international trade and globalization. Here we also touch upon the macroeconomic policies in developing nations. IN the final part of the course, part 5, the issue of economic downturn and crisis is studied. The theory is examined in the light of the economic crisis of 2008-2009 that plagued USA, in particular, and the world economy in general. (3 credits) **Spring CRN:** 5702

SOCIAL SCIENCE ELECTIVES

Urban Agriculture & Food Activism | UENV 4704A RECOMMENDED
15 weeks. W 3:00P – 5:40P, beg. Jan 30, 2013.
Kristin Reynolds

This course explores relationships between urban food production and social and environmental activism. As a class, we review various types of urban agriculture and motivations for engaging in food production in cities. We consider links between urban agriculture and contemporary social movements for urban sustainability and justice (e.g., green jobs, food justice, urban greening). Throughout the semester we also explore our own positionality as university-based stakeholders in the local urban food system. The course includes guest lectures and field trips, as well as participation in a community project. (3 credits) **Spring CRN:** 6439

History & Literature of US Environmentalism | UENV 2500A RECOMMENDED
15 weeks. MW 10:00A – 11:40A, beg. Jan 28, 2013.
Robert Buchanan

This course takes a literary approach to the history of American environmentalism. Starting with the journals of early explorers and settlers and surveying four centuries of nature writing, popular history, and journalism, the course will offer an introduction to American ideas of wilderness and the natural world and chart the ways in which they have changed from the colonial era to the digital age. Major topics include the birth of "the conservation movement" at the end of the 19th century; the "land ethic" and the rise of ecological thinking; the landmark wilderness preservation and anti-pollution campaigns of the 1960s and 70s; and contemporary issues including environmental justice and "ecoterrorism." Readings range from "classic' works by Emerson, Thoreau, John Muir, and Aldo Leopold to more contemporary pieces by Rachel Carson, Edward Abbey, and John McPhee, among others; the role of photography and documentary film will also be explored. Students should emerge with a good grasp of the foundations and challenges of the environmental movement today, as well as an appreciation for the power of writing and image-making to shape public opinion and shift public policy.
(4 credits) **Spring CRN:** 7387

Social Justice in Food System | UENV 4703A RECOMMENDED
15 weeks. M 4:00P – 5:50P, beg. Jan 28, 2013.
Kristin Reynolds

This course explores social justice in today's globalized food system. We learn about strategies and discourses used by community-based activists, government agencies, non-profit organizations, and scholars in order to realize a more just food system for all. We begin by developing an understanding of the food system as one that encompasses farm and industry workers, farm owners and collectives, and agroecological systems, as well as all those who consume food. Based on this understanding, we review various concepts that encapsulate aspects of social justice, (e.g., environmental justice; food justice; food sovereignty), and how these are applied in multiple contexts and social movements. Throughout the semester we also explore our own positions as university-based stakeholders in the food system, and students will be encouraged to integrate aspects of their own scholarly and/or activist projects into one or more course assignments. This course includes guest speakers and field trips to contextualize readings and in-class discussions. (3 credits) **Spring CRN:** 7646

Green Urbanism in Practice | UENV 4708A RECOMMENDED
15 weeks. T 4:00P – 3:30P, beg. Jan 29, 2013.
Rob Pirani

This class offers an opportunity for students to learn how urban planners and other design professionals approach and solve the practical challenges of creating greener and more sustainable places. Students will review selected concepts of city and regional planning and assess the ways and means by which decisions about location and density of development, mobility of people and goods, and management of water and other resources are made. Learning objectives include understanding how planners prepare and analyze information; how decisions about cities and the

public realm are made; and the different scales at which planners operate. Short book reviews and class discussions will allow students to explore these topics in depth. As a core assignment, teams of students will be asked to develop a specific plan for a location in New York City. Our likely study site will be near Jamaica Bay, where Hurrican Sandy and a recent Memorandum of Understanding between the City and the National Park Service is driving a number of park and infrastructure investments that bring together community, natural resource, and resiliency concerns.. The assignment and discussions will focus on professional skill development such as identifying client needs, ways of understanding a site or a place, developing a work plan, and preparing public presentations. (3 credits) **Spring CRN:** 7771

Food Policy for Local Food Revolution | NFDS 3201A

15 weeks. M 6:00–7:50P, beg. Jan 28, 2013.

Thomas Forster

Our food system relies on industrial farming practices controlled by relatively small clusters of global firms, with negative consequences for farm communities, urban consumers, and the environment. This course explores how ecologically and socially sustainable alternatives, from community-supported agriculture programs to inner-city farms, are generating excitement and energy at the city, state, national, and international levels. Through readings, lectures, and field trips, we examine contemporary policy responses to food systems challenges on three levels city-state, state-federal, and national-international. We discuss how food and farm policy governs markets, provides incentives, and channels individual food choices as well as emerging social movements and policy coalitions in the United States and internationally. We hear from leaders advocating policy change, who discuss how community-based solutions might be scaled up to address the interlocking challenges of persistent hunger and poverty, environmental degradation and climate change, growing urban and rural food deserts, epidemics of preventable chronic diseases, and collapsing rural economies. The course provides tools for advocacy through interactive participation and engagement with food and farm policy. (3 credits) **Spring CRN:** 4386

Alternative Food Networks | NFDS 3203A

15 weeks. Time TBA

Kimberly Ann Libman

In recent decades, alternative food production and consumption practices have emerged in response to concerns about the environmental and social impact of the global industrial food system. Farmer's markets, community-supported agriculture, food co-ops, and urban farms are examples of alternative food networks, which are place-based, socially embedded, and intended to change the way we grow, know, and get our food. In this class, we examine the history of these and other alternative food enterprises. Using critical theory, we evaluate the promise and limitations of alternative food networks as a means of creating more sustainable and just food systems. Readings are drawn from the fields of economic geography, rural sociology, community psychology, critical theory, and public health. Case studies from the popular press serve as a basis for class discussions about the practices brought together under the umbrella of alternative food networks. (0-3 credits) **Spring CRN:** 6150

Food Hubs and Value-Based Supply Chains (VBSCs) | MSUS 5006A

15 weeks. W 8:00P – 9:50P, beg. Jan 30, 2013

Dennis A Derryck

Local food has become a mantra for many and changed the way food is produced, sold, and even eaten. Values-based producers using environmentally sustainable practices need new ways to reach consumers interested in their products. Producers within values-based supply chains (VBSCs), and the food hubs that aggregate product from these types of producers, desire to achieve a "new mainstream" food system that is expected to challenge, if not replace, the conventional food supply chain. This course will examine the general themes of the recently published research in the area. We will examine the "growth" among small and mid-sized farmers; look at how VBSCs work compared to mainstream food systems; examine the benefits, barriers and concerns of VBSCs; and the best practices among the many recent case studies that have been published. Resources permitting we will include field trips to the food hubs that form part of the VBSCs in the New York region. Elective in the Milano School Food and the Environment Area of Specialization. (3 credits) **Spring CRN:** 7647

Global Urban Environmental Policy | MPLC 5042A

15 weeks. T 6:00P – 7:50P, beg. Jan 29, 2013.

Shagun Mehrotra

40 trillion dollars will be invested, over the next two decades, in bridging the global deficit in environmental infrastructure—transport, energy, and water. Advanced industrial economies confront aging infrastructure. In developing countries, where infrastructure is scarce, three billion people will be added to cities by 2050—mainly in slums of Africa and Asia—further exacerbating urban environmental degradation. This course examines old and new theories of environmental infrastructure policy and planning: (1) role of the state; (2) privatization (its rationale, methods, outcomes) and; (3) alternate theories for institutional reform with a focus on strict and weak equity and efficiency trade-offs. Drawing on global case studies of infrastructure sectors we will explores solutions to 21st century environmental challenges of rapid urbanization in some places, and economic growth during fiscal austerity in others. Requirement for the MS, Environmental Policy and Sustainability Management with an area of concentration in Policy. Elective in the Milano School Global Urban Futures and Leading Sustainability Areas of Specialization, as well as the Cities and Social Justice Concentration for the Masters in International Affairs. **Spring CRN:** 2985

City in Environment | NINT 5284
15 weeks. T 4:00P – 5:50P, beg. Jan 29, 2013.
Victoria Marshall

What are the sources and consequences of urban environmental degradation? What is the role of cities in broader patterns of environmental degradation? How do different social groups interpret this process and tackle (or ignore) its challenges? This course takes a political economy approach to environmental dynamics as they relate to the city, paying special attention to the role of globalization. Topics include the culture of consumption, movements for environmental justice, and the growing role of cities as political actors within transnational environmental politics. We will draw on (and build upon) case studies taken from New York - including an oil spill in Brooklyn and a sewage treatment plant in Harlem - as well as from urban Brazil, India and China. Assignments will include the use of mapping techniques to explore the spatial dimensions of urban environmental politics and to better understand the challenges of "designing the livable city." (3 credits) **Spring CRN:** 4891

SENIOR REQUIREMENTS

Senior Internship | UENV 3900A
Offered in Fall/Spring/Summer
TBA
Spring CRN: 4734

Directed Research: Thesis
UENV 4211A
Offered in Spring
15 weeks. TR 6:00-7:40P, beg. Jan 29, 2013.
Ariel Muller and Brandon Koenig
Spring CRN: 7127

Directed Research: Research Methods (Pre-Thesis)
UENV 4210A
Offered in Fall

Note: Register for the Directed Research course 4210A listed on Class Finder. The course number will be changed to 4211A shortly, and the course will be offered on the same day and at the same time.

This course provides a connection between practical experiences (i.e., internships) and your capstone research paper or project. The focus will be on the process of conducting research and communicating results. Through brainstorming exercises, writing assignments, and small projects, students will gain the skills necessary to conduct a literature review and initial research proposal that will begin the process of completing their senior thesis. (0-4 credits)

Portfolio Strategies: Lecture | PSDS 4110
15 weeks. F 10:30A – 11:45A, beg. Feb 1, 2013
Spring CRN: 6243
0 Credits
Robert Rabinovitz

Portfolio Strategies: Workshop Section | PSDS 4111
15 weeks. F, 3:50P – 5:05P, beg. Feb 1, 2013.
Spring CRN: 7746
3 Credits

Note: The lecture (PSDS 4110) and workshop (PSDS 4111) sections of this course must be taken together in order to qualify for credit.

In this lecture/workshop course, students will learn about "knowledge assets" and become skilled at identifying, highlighting and articulating the value of their competencies. The lecture portion of this course will introduce fundamental concepts including knowledge assets, human capital, and intellectual development. Workshop sessions are dedicated to the articulation of individual expertise and interests through the production of a personal portfolio, a portfolio management system, and essays. Lecture/Workshop Section.

II. ADDITIONAL COURSES REQUIRED FOR BACHELOR OF SCIENCE (BS) MAJORS

Sustainable Everyday Practices | PSDS 3602
Offered in Spring
15 weeks. F 9:00A – 2:40P, beg. Feb 1, 2013.
Katherine H. Scott
Technological changes alone cannot sufficiently enhance societal sustainability— and even those technologies that do make notable contributions require significant social change to be successful. Promoting sustainability therefore involves sophisticated understandings of the motivations and habits of humans as well as clever and comprehensive ways of shifting people's behaviors and expectations. This course will cover various techniques and strategies for fostering more sustainable everyday ways of living through a combined seminar and studio. In the seminar, the class will consider a range of theories and approaches addressing the complexities of sociotechnical change in relation to sustainability and design. This includes literature from the interdisciplinary domains of design research, science and technology studies, industrial ecology, consumption studies and consumer culture theory, among others. In the studio, the class will integrate theoretical learning with a case project as a 'living lab', a design research framework oriented toward experimentation in the dynamic context of everyday life. **Spring CRN:** 6241

III. ES CONCENTRATION ELECTIVES

Concentrations are optional and have been designed to build a thematic area of expertise in the field. Students must complete three courses that are 3000 level or upwards in a selected concentration to receive credit.

CONCENTRATION OPTIONS:

*note, courses are tagged ESPP or UE respectively

- Environment, Society, and Public Policy (ESPP)
- Urban Ecosystems (UE)

Urban Agriculture & Food Activism | UENV 4704A ESPP UE RECOMMENDED
15 weeks. W 3:00P – 5:40P, beg. Jan 30, 2013.
Kristin Reynolds
This course explores relationships between urban food production and social and environmental activism. As a class, we review various types of urban agriculture and motivations for engaging in food production in cities. We consider links between urban agriculture and contemporary social movements for urban sustainability and justice (e.g., green jobs, food justice, urban greening). Throughout the semester we also explore our own positionality as university-based stakeholders in the local urban food system. The course includes guest lectures and field trips, as well as participation in a

community project. (3 credits) **Spring CRN:** 6439

Social Justice in Food System | UENV 4703A ESPP UE RECOMMENDED

15 weeks. M 4:00P – 5:50P, beg. Jan 28, 2013.
Kristin Reynolds

This course explores social justice in today's globalized food system. We learn about strategies and discourses used by community-based activists, government agencies, non-profit organizations, and scholars in order to realize a more just food system for all. We begin by developing an understanding of the food system as one that encompasses farm and industry workers, farm owners and collectives, and agroecological systems, as well as all those who consume food. Based on this understanding, we review various concepts that encapsulate aspects of social justice, (e.g., environmental justice; food justice; food sovereignty), and how these are applied in multiple contexts and social movements. Throughout the semester we also explore our own positions as university-based stakeholders in the food system, and students will be encouraged to integrate aspects of their own scholarly and/or activist projects into one or more course assignments. This course includes guest speakers and field trips to contextualize readings and in-class discussions. (3 credits) **Spring CRN:** 7646

The Sciences of Climate Change | UENV 4709A ESPP UE RECOMMENDED

15 weeks. TR 3:50 – 5:30P, beg. Jan 28, 2013.
Sanpisa Sritraitrait

Students will be introduced to various hypotheses and theories of climate forcing as well as Earth's climate history and its environmental impacts to shed light on future climate change and solutions. The interaction and feedbacks among biological and geological components, biogeochemical factors, the carbon cycle, hydrological cycle, the greenhouse effect, ocean circulation, orbital and solar forcing and human influences to climate system will be examined. We will investigate major climate events in the past, such as the theory of the Snowball Earth, extreme Cenozoic warming, glaciation cycles, and ENSO. We will discuss how these climatic events affect biological evolution, hydrological pattern and ancient societies around the world. We will then address the future of climate change and asses its possible impacts to water, temperature, sea level, ecosystems, and human civilization based on modern field studies, experiments and modeling. Climate policies and choices for remediation will be examined. Class includes hands on experiments, quantitative analysis, field trips, and group discussions. The class will provide an essential background for students who are interested in environmental sciences as well as environmental policies and management. (4 credits) **Spring CRN:** 7699

Green Urbanisms / Regionalism | UENV 4708A UE RECOMMENDED

15 weeks. T 1:50P – 3:30P, beg. Jan 29, 2013.
Rob Pirani

This class offers an opportunity for students to learn how urban planners and other design professionals approach and solve the practical challenges of creating greener and more sustainable places. Students will review selected concepts of city and regional planning and assess the ways and means by which decisions about location and density of development, mobility of people and goods, and management of water and other resources are made. Learning objectives include understanding how planners prepare and analyze information; how decisions about cities and the public realm are made; and the different scales at which planners operate. Short book reviews and class discussions will allow students to explore these topics in depth. As a core assignment, teams of students will be asked to develop a specific plan for a location in New York City. Our likely study site will be on the Rockaway Peninsula, where a recent Memorandum of Understanding between the City and the National Park Service is driving a number of park and infrastructure investments. The assignment and discussions will focus on professional skill development such as identifying client needs, ways of understanding a site or a place, developing a work plan, and preparing public presentations. (3 credits) **Spring CRN:** 7771

Principles of Environmental Science | MSUS 5000A UE

15 weeks. M 8:00P – 9:50P, beg. Jan 28, 2013.
Konstantine J. Rountos

In order for management professionals to address issues of sustainability adequately, they need to know and understand some of the basic underlying science. This course will introduce students to the fundamental scientific, technical, and analytical issues relating to environmental studies, providing a strong foundation so they can be conversant in the multidisciplinary environmental that is sustainability management. At the same time, students will develop the communications skills necessary to operate successfully in this space. Learning Objectives: What are the limits to human/economic growth? What are the boundary conditions limiting growth/continued ecosystems support of human activities Issues around human population growth and associated impacts Basic sustainability science, including biogeochemical cycles, ecosystem processes, global warming, urban pollution and sprawl, land use change, water use and availability. An introduction to the quantification tools for applied sustainability, including Life Cycle Analysis, Materials Flow Analysis, and Ecosystem Valuation Presentation skills to communicate core sustainability issues to the wider world. Requirement for the MS, Environmental Policy and Sustainability Management. (3 credits) **Spring CRN:** 5287

Food Policy for Local Food Revolution | NFDS 3201A ESPP

Offered in Spring

15 weeks. M 6:00–7:50P, beg. Jan 28, 2013.

Thomas Forster

Our food system relies on industrial farming practices controlled by relatively small clusters of global firms, with negative consequences for farm communities, urban consumers, and the environment. This course explores how ecologically and socially sustainable alternatives, from community-supported agriculture programs to inner-city farms, are generating excitement and energy at the city, state, national, and international levels. Through readings, lectures, and field trips, we examine contemporary policy responses to food systems challenges on three levelscity-state, state-federal, and national-international. We discuss how food and farm policy governs markets, provides incentives, and channels individual food choices as well as emerging social movements and policy coalitions in the United States and internationally. We hear from leaders advocating policy change, who discuss how community-based solutions might be scaled up to address the interlocking challenges of persistent hunger and poverty, environmental degradation and climate change, growing urban and rural food deserts, epidemics of preventable chronic diseases, and collapsing rural economies. The course provides tools for advocacy through interactive participation and engagement with food and farm policy. (3 credits) **Spring CRN:** 4386

Alternative Food Networks | NFDS 3203A ESPP

Offered in Spring

15 weeks. Time TBA

Kimberly Ann Libman

In recent decades, alternative food production and consumption practices have emerged in response to concerns about the environmental and social impact of the global industrial food system. Farmer's markets, community-supported agriculture, food co-ops, and urban farms are examples of alternative food networks, which are place-based, socially embedded, and intended to change the way we grow, know, and get our food. In this class, we examine the history of these and other alternative food enterprises. Using critical theory, we evaluate the promise and limitations of alternative food networks as a means of creating more sustainable and just food systems. Readings are drawn from the fields of economic geography, rural sociology, community psychology, critical theory, and public health. Case studies from the popular press serve as a basis for class discussions about the practices brought together under the umbrella of alternative food networks. (0-3 credits) **Spring CRN:** 6150

Food Hubs and Value-Based Supply Chains (VBSCs) | MSUS 5006A ESPP

Offered in Spring

15 weeks. W 8:00P – 9:50P, beg. Jan 30, 2013

Dennis A Derryck

Local food has become a mantra for many and changed the way food is produced, sold, and even eaten. Values-based producers using environmentally sustainable practices need new ways to reach consumers interested in their products. Producers within values-based supply chains (VBSCs), and the food hubs that aggregate product from these types of producers, desire to achieve a "new mainstream" food system that is expected to challenge, if not replace, the conventional food supply chain. This course will examine the general themes of the recently published research in the

area. We will examine the "growth" among small and mid-sized farmers; look at how VBSCs work compared to mainstream food systems; examine the benefits, barriers and concerns of VBSCs; and the best practices among the many recent case studies that have been published. Resources permitting we will include field trips to the food hubs that form part of the VBSCs in the New York region. Elective in the Milano School Food and the Environment Area of Specialization. (3 credits) **Spring CRN:** 7647

Global Urban Environmental Policy | MPLC 5042A ESPP

Offered in Spring

15 weeks. T 6:00P – 7:50P, beg. Jan 29, 2013.

Shagun Mehrotra

40 trillion dollars will be invested, over the next two decades, in bridging the global deficit in environmental infrastructure—transport, energy, and water. Advanced industrial economies confront aging infrastructure. In developing countries, where infrastructure is scarce, three billion people will be added to cities by 2050—mainly in slums of Africa and Asia—further exacerbating urban environmental degradation. This course examines old and new theories of environmental infrastructure policy and planning: (1) role of the state; (2) privatization (its rationale, methods, outcomes) and; (3) alternate theories for institutional reform with a focus on strict and weak equity and efficiency trade-offs. Drawing on global case studies of infrastructure sectors we will explores solutions to 21st century environmental challenges of rapid urbanization in some places, and economic growth during fiscal austerity in others. Requirement for the MS, Environmental Policy and Sustainability Management with an area of concentration in Policy. Elective in the Milano School Global Urban Futures and Leading Sustainability Areas of Specialization, as well as the Cities and Social Justice Concentration for the Masters in International Affairs.

Environmental Law and Science for Policy Analysts and Sustainability Managers | MSUS 5001A ESPP

15 weeks. R 6:00P – 7:50P, beg. Jan 31, 2013.

Hilary Semel

Since the early 1970s, the interdisciplinary fields of environmental law and science have informed the environmental policies that are widely practiced today. In the past decade, these disciplines have influenced the growing practice of sustainability management, therefore, a strong understanding of law and science is essential for effective analysts and managers. This course reviews key provisions of environmental law and the scientific and social principles that underlie such laws. Moreover, it will examine the application of these disciplines to particular issues in environmental policy and sustainability management. The goal of the course is to familiarize students with environmental law and science and to provide experience in applying these principles. Meets the Making a Difference Requirement for the MS, Environmental Policy and Sustainability Management. Elective in the Milano School Leading Sustainability Area of Specialization. (3 credits) **Spring CRN:** 5288

IV. ADDITIONAL ELECTIVE OPTIONS

These courses have been identified as Environmentally Studies related. Please consult your advisor to determine where and if courses can fulfill requirements.

Contemporary Food Controversies | NFDS 2001A

Offered in Spring

15 weeks. W 6:00P–7:50P, beg. Jan 30, 2013.

Andrew Smith

Everybody eats. Yet few understand the importance of food in our lives and the decisions we make each time we eat. This class will provide an overview of the industrialization of the U.S. food system, probe problems created by the industrial food, and examine alternatives. Is organic food better for us, or is it just a fad of the elite? Are genetically engineered products "frankenfoods," or are they the key to feeding the planet? Does globalization destroy local culinary traditions or increase diversity? Can locally produced artisanal food ever replace industrial food in the world's most populated urban

centers? What do we really know about the relationship between nutrition and health? This course addresses political, economic, historical, social, and cultural dimensions of food. Guest speakers enliven our discussions of these fascinating topics. **Spring CRN:** 3502

Hunger, Food Security, and the Global Food Crisis | NFDS 3210A

Offered in Spring
15 weeks. M 8:00–9:50P, beg. Jan 29, 2013.
Jessica Wurwarg

What is hunger, and how has our perception of it evolved? What does it mean to be food secure? Is food a human right? What constitutes a food crisis? Is there a single food crisis—or are there many? We explore the root causes of food crises and potential solutions while examining international food policy and its role in development. We assess the economic, social, and environmental sustainability of possible solutions to food insecurity and look at the maintenance of food security. We also study the role of water and the impact of water scarcity on food production. Research and class discussions focus on ways to improve food security and food aid. Case studies may include Haiti, Brazil, Kenya, Mali, and India. (0-3 credits) **Spring CRN:** 6151

Politics and Power in the Global Food System | NFDS 3230A

Offered in Spring
15 weeks. T 4:00–5:50P, beg. Jan 29, 2013.
Maya Lucy Joseph

This course is about the major decisions, institutions, patterns, habits, and arguments that structure the contemporary global food system. We look at why food prices are up and fish stocks are down, the effects of trade barriers, and where food aid programs originated. We discuss the social and political ramifications of patenting agricultural staples, the labor that goes into cheap food, and the long- term effects of changing diets. To put everything in perspective, we adopt a historical approach that identifies both the malleable features and fixed contours of our food system. The course is intended to get students to consider today's food system as a product of our history and contemplate how decisions we make today will shape our food system in the future. (0-3 credits) **Spring CRN:** 4148

Hunger, Food Security, and the Global Food Crisis | NFDS 3210A

Offered in Spring
15 weeks. M 8:00–9:50P, beg. Jan 29, 2013.
Jessica Wurwarg

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ENVIRONMENTAL STUDIES DEGREE REQUIREMENT

UPDATED 2012

Environmental Studies focuses on three disciplines: science, urban studies, and design. Students use New York City, one of the world's largest urban ecosystems, as their laboratory. For more information about the program, please visit www.newschool.edu/environmental-studies/.

Lang students can pursue Environmental Studies as a **major only,** either a BA or BS degree. Three concentrations are offered: *Urban Ecosystems*, *Sustainable Design*, and *Public Policy*. Credit for a concentration is earned by completing three 3000- or 4000-level courses approved for that concentration. Students are encouraged, but not required, to choose a concentration. Lang students should consult with the Lang Academic Advising Office in addition to the environmental studies advisor to ensure appropriate progress toward degree completion.

Only specific courses satisfy the major requirements, including electives. Not all courses are not offered each semester. Courses should be carefully chosen in consultation with an advisor. Students must receive grades of C or above in all courses taken to fulfill major requirements.

Major

The **BA** degree in Environmental Studies requires successful completion of 16 courses distributed as described below, the senior capstone/directed research project, and an internship. The **BS** degree course distribution requirements are the same as those of the BA, plus two additional studio courses.

Required Courses		**Credits**
UENV 2000	Environment and Society	3
UENV 2400	Principles of Ecology	4
UENV 3400	Urban Ecosystems	4
LSCI 2502	Chemistry and the Environment	4
UENV 3200	Spatial Thinking with GIS*	4
PSDS 1601	Ecological Communication Design	3
PSDS 2610	Sustainable Design Thinking Lab	3
PSDS 2602	Material Impacts	6
UENV 3450	Ecology Lab*	4
LMTH 2050	Math Models in Nature	4
One Mathematics course from the following:		3-4
LMTH 2030	Statistics with SPSS (*Recommended*) or	
LMTH 2040	Calculus	
One Economics course:		3-4
LECO 2050	Environmental Economics (Recommended) or	
Other LECO course with permission		
One Social Science course:		3-4
UENV 2150	Planning Sustainable Cities (*Recommended*) or	
Other social science course with permission		
UENV 4210	Directed Research: Research Methods (Pre-Thesis)	4
PSDS 4110/4111	Senior Capstone – Portfolio (Lecture & Workshop)	3
UENV 4211	Directed Research (Senior Thesis)	4
UENV 3900	Senior Internship (Recommended summer before senior year)	0
Optional Concentration Electives (3 courses)		*12*
BA Total Credits without concentration	**59-62**	
BA Total Credits with concentration	**71-74**	
Additional requirements for BS students only:		
PSDS 3602	Sustainable Everyday Practices	6
PSDS 3601	Sustainable Business	6
BS Total Credits without concentration	**71-74**	
BS Total Credits with concentration	**83-86**	

**Indicates a course where alternate courses may be approved, in consultation with an advisor or core faculty member from Environmental Studies*