ENGLISH

ENVIRONMENTAL SCIENCE AND POLICY

College of Social Science

800 Principles of Environmental Science and Policy
Fall. 3(3-0)
Overview of scholarship and research in environmental science and policy

801 Physical, Chemical, and Biological Processes of the Environment
Fall. 3(3-0) RB: Bachelor's or Master's in appropriate discipline for specialization. SA: SSC 801

802 Human Systems and Environment
Spring. 3(3-0) RB: Bachelor's or Master's in appropriate discipline for specialization. SA: SSC 804
Anthropological, economic, geographical, legal, political, and sociological concepts of human systems and environmental change.

803 Human and Ecological Health Assessment and Management
Fall. 3(3-0) RB: Familiarity with the basic concepts of physics, chemistry and biology of environmental processes, and the relationships between human systems and the environment. SA: SSC 805
Concepts and techniques used to evaluate human and ecological health impacts from anthropogenic activities. Policy formulation and management strategies to mitigate health effects.

804 Environmental Applications and Analysis
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: ESP 801 and (ESP 802 or concurrently) and ESP 803 or approval of department. RB: Bachelor's or Masters in appropriate discipline for specialization. SA: SSC 806
Global, regional and local environmental issues. Use of systems approach to identify and solve environmental problems.

805 Introduction to Environmental and Social Systems Modeling
Fall. 1(1-0)
Theoretical background of diverse modeling problems in complex environmental systems. Diverse modeling approaches to most appropriate modeling tools in a variety of contexts.

846 Corporate Environmental Crime and Risk
Spring of odd years. 3(3-0) Interdepartmental with Criminal Justice and Fisheries and Wildlife. Administered by Criminal Justice. R: Open to masters students or doctoral students in the Department of Fisheries and Wildlife or in the School of Criminal Justice or approval of school.
Theoretical accounts and multiple interventions relevant to corporate environmental crime and risk. Use of “Smart Regulation” principles to design interventions to match specific problems.

806 Human Systems and Environment
Fall. 3(3-0) RB: Bachelor's or Master's in appropriate discipline for specialization. SA: SSC 801

807 Human Systems and Environment
Spring. 3(3-0) RB: Bachelor's or Master's in appropriate discipline for specialization. SA: SSC 804
Anthropological, economic, geographical, legal, political, and sociological concepts of human systems and environmental change.

808 Human and Ecological Health Assessment and Management
Fall. 3(3-0) RB: Familiarity with the basic concepts of physics, chemistry and biology of environmental processes, and the relationships between human systems and the environment. SA: SSC 805
Concepts and techniques used to evaluate human and ecological health impacts from anthropogenic activities. Policy formulation and management strategies to mitigate health effects.

809 Environmental Applications and Analysis
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: ESP 801 and (ESP 802 or concurrently) and ESP 803 or approval of department. RB: Bachelor's or Masters in appropriate discipline for specialization. SA: SSC 806
Global, regional and local environmental issues. Use of systems approach to identify and solve environmental problems.

810 Introduction to Environmental and Social Systems Modeling
Fall. 1(1-0)
Theoretical background of diverse modeling problems in complex environmental systems. Diverse modeling approaches to most appropriate modeling tools in a variety of contexts.

847 Global Risks, Conservation, and Criminology
Fall. 3(3-0) Interdepartmental with Criminal Justice and Fisheries and Wildlife. Administered by Criminal Justice. R: Open to graduate students or approval of school.
Theories, actors, characteristics and legal instruments associated with risk, conservation, and criminology related to globalization. Current case studies in criminological conservation.

811 Introduction to Environmental and Social Systems Modeling
Fall. 1(1-0)
Theoretical background of diverse modeling problems in complex environmental systems. Diverse modeling approaches to most appropriate modeling tools in a variety of contexts.

850 Modeling Natural Resource Systems
Spring. 3(3-0) Interdepartmental with Community Sustainability and Fisheries and Wildlife. Administered by Community Sustainability. RB: ecology, statistics, and calculus SA: ACR 851
Introductory quantitative modeling of environmental systems.

812 Introduction to Environmental and Social Systems Modeling
Fall. 1(1-0)
Theoretical background of diverse modeling problems in complex environmental systems. Diverse modeling approaches to most appropriate modeling tools in a variety of contexts.

851 Geosimulation
Spring. 3(3-0) Interdepartmental with Geography. Administered by Geography. RB: Basic understanding of data structures and algorithms covered in an introductory course of any programming language. R: Approval of department.
Theoretical concepts related to simulating dynamic geographic phenomena in the intersection between human and natural systems. Innovative agent-based methodology applied to complex social-environmental systems. Hands-on experience of agent-based modeling, with special emphasis on modeling human decision-making and its impact on the natural environment.

813 Multi-Equation Quantitative Models
Spring. 3(3-0) Interdepartmental with Sociology. Administered by Sociology. P: SOC 881 and SOC 882 or approval of department. R: Open to graduate students in the Department of Sociology and open to graduate students in the Environmental Science and Policy Specialization or approval of department.
Quantitative methodology: multilevel modeling; structural equation modeling. Applications in sociology and environment.

814 Environmental Risk Perception and Decision-Making
Spring of even years. 3(3-0) Interdepartmental with Criminal Justice and Fisheries and Wildlife. Administered by Criminal Justice. R: Open to masters students or doctoral students in the School of Criminal Justice or in the Department of Fisheries and Wildlife or approval of school.
Theoretical underpinnings of individual decision-making and risk perception processes. Case studies of the interplay of risk perception and decision-making in an environmental and or criminological context.

815 Selected Topics in Environmental Science and Policy
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course.
In-depth study of selected environmental science and policy issues.

890 Modeling Environmental and Social Systems
Fall. 2(2-0)
Modeling project of real-world environmental problems. Theories and methodologies from previous modeling courses to practical policy problems. Applied project with a variety of modeling tools and a trans-disciplinary synthesis. Model development, implementation, and evaluation in student groups.