2014 Spring Course Offerings
Environmental Studies

ES 001-10 Introduction to Environmental Studies, CRN 16119 (4 credits) (SS)  
T, TR, 9:20 a.m. - 10:35 a.m.  
Gateway to the field of Environmental Studies, the course surveys central issues and themes confronting humanity in the natural world on a national and global basis. Topics include humankind's role in environmental change; society's response to the dynamism of nature; cultural evaluations of nature; population dynamics; resource availability and pollution sinks; land use patterns; sustainability and consumerism; environmental justice and ethics; policy and planning. This course fulfills a social science credit requirement (SS) please select ES 2 to fulfill the natural science (NS) requirement. 
Professor Casagrande

ES, EES 004-60 The Science of Environmental Issues, (1 credits) (NS)  
Section 60 M, 11:10 a.m. - 12:25 p.m. CRN 14364  
Section 61 F, 1:10 p.m. - 12:25 p.m. CRN 14369  
Section 62 W, 11:10 a.m. - 12:25 p.m. CRN 14373  
Analysis of current environmental issues from a scientific perspective. The focus of the course will be weekly discussions based on assigned readings. Pre- or co-requisite: introductory-level course in EES. Professor Kodama

ES 093-10 Lehigh Earth Observatory Field/Laboratory Internship, CRN 16120 (1-4 credits) (SS, HU, NS or ND)  
The Lehigh Earth Observatory (LEO) is a distributed, multidisciplinary program that focuses study on the environment with a particular emphasis on understanding the science of environmental systems and the relationship between these systems and society. LEO has a focus on environmental systems, drawing students from a variety of disciplines including policy, management, economics, journalism, business, art, and philosophy in addition to science and engineering. Field projects contribute to an overall theme of postindustrial land use and development as it impacts the natural environment of the Lehigh Valley, and may include long-term monitoring programs, or individually designed projects that contribute to the overall mission that includes science, engineering, policy, communications, ethics, social dynamics, and other environmentally pertinent aspects of the region. Students work with a faculty advisor on individually designed projects. Projects may involve technical, social, educational, or other outreach activities, and NS, SS, or HU credits are designated as appropriate. This course is intended for first time participants and is not repeatable for credit. Past projects and more details about LEO are available at http://www.leo.lehigh.edu. Students should contact the Environmental Initiative for departmental permission to register.

ES, GCP, EES 100-10 Earth System Science, CRN 18933 (4 credits) (SS)  
T, TR, 9:20 a.m. - 10:35 a.m. and TR 1:10 p.m. - 4:00 p.m.  
Examination of the Earth as an integrated system. Study of interactions and feedbacks between key components such as the atmosphere, geo-sphere, and hydrosphere to permit better understanding of the behavior of the system as a whole. Response of the Earth system to human perturbations such as land use and emissions are explored in the context of predictions of future environmental conditions and their projected impacts back on human systems. Lectures, class discussions, and recitation. Prerequisites: EES 22. Professor Zeitler

ES, POLS 106-10 Environmental Value & Ethics, CRN 17791 (4 credits) (SS)  
M, W, 12:45 p.m. - 2:00 p.m.  
An introduction to the ethical perspectives and values that shape human relationships to the natural environment in contemporary society. What are the moral implications of these relationships for justice and human collective action? Given these implications, what policy responses to environmental problems are morally or politically justifiable? In answering these questions, the course explores ethical ideas developed in different schools of environmental thought, such as deep ecology and eco-feminism, in addition to ideas that emerge from social movements, such as environmental justice and bioregionalism. 
Professor Holland

ES 124-10 Sustainability in Action II (Spring), CRN 18867 (1-4 credits) (ND)  
Continuation of ES 123 Sustainability in Action I; second half of a year-long experiential learning program for students to engage with sustainability in both general theory and applied practices. Students will learn the political, economic and social effects of changing earth systems through a global, national and local lens. Students will explore the multitude of challenges posed by increasing natural resource consumption, inequitable distribution of wealth and rapid uneven globalization. Most importantly, students will engage the Lehigh community and broader community in developing and implementing practical solutions to creating a more sustainable and just world. Students in ES 124 expand the scope and scale of sustainability projects and activities piloted in ES 123. Offered in coordination with the Campus Eco-Reps program. Instructor permission required. May be repeated for credit Professor Wurth

ES 131-10 Internship, CRN 17959 (1-2 credits) (ND)  
Practical experience in the application of environmental studies for both on- and off-campus organizations. Course is designed to provide credit for supervised experiential learning experiences. May be repeated for credit up to four credits. Prerequisite: consent of the program director.

ES 181-10 Independent Study, CRN 11056 (1-4 credits) (HU, SS)  
Directed readings or research on an Environmental Studies topic. May be repeated for credit up to four credits. Prerequisite: consent of the program director.

SDEV 201-10 Sustainable Development Solutions, I, CRN 18847 (2-4 credits) (SS)  
M, W, 1:10 p.m. - 12:25 p.m.  
Projects practicum in which cross-disciplinary teams of 5-6 students focus on understanding the context of a particular NGO amidst the broader social, economic, and scientific challenges to sustainable development. Analytic techniques for designing, implementing and evaluating projects. Nuts and bolts of development practice. Teams work on needs assessment related to their NGO’s proposed goals and devise innovative solutions for implementing development projects. On-the-ground field experience, whether international or domestic, is required. Course fee may apply. Oral presentations and written reports. Prerequisite: SDEV 010 or permission of the Program Director. Professor Orrs

SDEV 203-10 Research in Sustainable Development, CRN 18848 (2-4 credits) (SS)  
Students will work on sustainable development research projects not involving field work. May be repeatable for a maximum of 4 credits. Prerequisite: SDEV 010 and instructor permission. Professor Orrs
ES 224-10 Advanced Sustainability in Action II (Spring), CRN 18868 (1-4 credits) (ND)
Continuation of ES 223. Leadership and coordination of Sustainability in Action projects and activities for students in ES 124. Experienced students who have completed the year-long Sustainability in Action sequence (ES 123 and ES 124) continue in course coordination role. Prerequisites, ES 123, ES 124 and ES 223. Offered in coordination with the Campus Eco-Reps Program. Instructor permission required. May be repeated for credit. Professor Wurth

REL, ES, ASIA 254-10 Buddhism and Ecology, CRN 17825 (4 credits) (HU) M, W, 2:35 p.m. - 3:50 p.m.
Buddhism’s intellectual, ethical, and spiritual resources and reexamined in light of contemporary environmental problems. Is Buddhism the most green of the major world religions? What are the moral implications of actions that affect the environment? Professor Kraft

CEE 272-10 Environmental Risk Assessment, CRN 18720 (2 credits) M, W, 9:10 a.m. - 10:00 a.m.
Effects of chemical releases on human health; ecological risks. Application of risk assessment methodology, including hazard identification, exposure assessment, toxicity assessment, and risk characterization. Accounting for uncertainty in data during risk management, risk reduction and implementation of regulations and environmental policy. Professor Brown

ES 293-10 Advanced Lehigh Earth Observatory Field/Laboratory Internship, CRN 16122 (1-4 credits) (NS, HU, SS)
A continuation of LEO Internship 93, this course will entail further development of supervised projects and leadership opportunities. Past projects and more details about LEO are available at http://www.leo.lehigh.edu. Students should contact the Environmental Initiative for departmental permission to register. Prerequisite: ES 93.

ENTP, IR 307-10 International Social Entrepreneurship, CRN 17778 (4 credits) (SS) M, W, 2:35 p.m. - 3:50 p.m.
International social entrepreneurship aims to change the world through innovation in solving social problems. Focus on the nexus between social entrepreneurship and development practice, especially in relation to NGOs. Emphasis on acquiring the tools and conceptual framework to launch a new social venture through real world hands-on field work and team-oriented learning by doing. Exposure to best practices in field methods with respect to development projects, to how to affect meaningful social change in poor countries, to generate and evaluate innovative ideas for poverty reduction, to develop those ideas into concrete on-the-ground start-up plans, and to take initial steps to implement them. It is recommended, but not required, that students have some previous experience with development or entrepreneurship, such as through enrollment in ENTP 101 or IR 322 or ECO 303 or CEE 205. Instructor Permission required. Professors Orrs and Watkins

ECO 311-10 Environmental Economics, CRN 18775 (3 credits) (SS) M, W, 2:35 p.m. - 3:50 p.m.
Resource allocation implications of environmental degradation. Analysis of the benefits and costs associated with alternative pollution control programs and strategies. pre-reqs for ES students waived, except ECO 001. Professor Figueroa-Armijos

ES, JOUR, HMS, STS 323-10 Health and Environmental Controversies, CRN 18000 (4 credits) (SS)
Section 10 T, TR, 10:45 a.m. - 12:00 p.m. CRN 18000
Section 11 T, TR, 1:10 p.m. - 12:25 p.m. CRN 18519
Exploration of health and environmental controversies from the perspectives of scientific uncertainty and mass media coverage. Examines genetic engineering, biotechnology, environmental health risks, and nanotechnology. Includes discussion of ethical and social responsibilities and interactions with the public. Department permission required. Professor Friedman

ES, IR 333-10 International Environmental Law & Policy, CRN 17646 (4 credits) (SS) T, 4:10 p.m. - 7:00 p.m.
This course examines the basic international legal setting for the protection and management of the global environment. It examines how international law concerning nature is made and applied, the role of international environmental regimes or institutions, enforcement strategies, and compliance mechanisms. Emphasis will be placed on a review of various regulatory regimes for the protection of the global commons, including the history and legal sources of the Global Climate Change Convention. Professor Gillroy

ES, TLT 367-10 Environmental Education, CRN 17504 (3 credits) (1/23, 3/20 & 3/20 7:10 p.m. – 10:00 p.m. & 3/22 & 4/12 9:00 a.m. – 4:00 p.m. & on-line)
Introductory environmental education course designed to prepare students to implement environmental education opportunities in formal and non-formal education settings. Topics include history and philosophy of environmental education, environmental laws and regulations, GIS, environmental issues and decision making, curriculum integration and environmental education teaching methodologies. This is a Web enhanced course containing both online and fieldwork components. Professor Bodzin

ES 371-10 Special Topics, CRN 11057 (1-4 credits) (HU, SS)
Intensive, research-oriented study of a subject or issue in Environmental Studies not covered in other courses. For students of demonstrated ability and adequate preparation. May be repeated for credit up to four credits. Prerequisite: consent of the program director.

SDEV 372-10 Independent Study in Sustainable Development, CRN 18849 (1-4 credits) (SS/HU)
Opportunity for students to pursue individual sustainable development projects or continue work begun in SDEV 201/202. May not count towards minor’s credit requirements. Prerequisite: SDEV 010 and department permission.

ES 381-10 Senior Seminar: Issues in Environmental Studies, CRN 16776 (4 credits) (SS) M, W, 11:10 a.m. - 12:25 p.m.
Advanced seminar focusing on discussion and research on specialized subjects in Environmental Studies. Subject matter varies from semester to semester. Intended for Environmental Studies majors and minors but open to others. Prerequisites: ES 1, 2 or another EES course, and one core course or consent of the program director. Professor Wurth

ES 391-10 Honors Thesis, CRN 12771 (1-4 credits) (HU, SS)
Directed undergraduate research thesis required of students who apply and qualify for graduation with program honors. Program permission required.

ES, IR 398-10 Philosophy, International Law & Policy Design, CRN 18596 (4 credits) (SS)
M, 4:10 p.m. - 7:00 p.m.
Beginning in the 13th Century, this seminar traces the various philosophical, historical, and policy design arguments that have been used to explain, justify, and influence the evolution of the rule of law between nations (ius gentium). Using foundational writings we will trace the European genesis of international law in Natural, Cannon, and Roman Law (ius commune) during the Middle-Ages, the implications for transnational law caused by the Reformation, the policy argument for the Treaties of Westphalia, the efforts of the Enlightenment to create a secular base for the development of an international rule of law and the rise of the theory of Positivism with the practice of Multilateralism from 1815 to the present. Finally, with this background, we will speculate as to the future prospects for international legal rules, processes, principles, and institutions in the face of Globalization especially concerning the global environment. IR Dept Approval Required. Professor Gillroy
ES, EES 402-10 Scientific Foundations for Environmental Policy Design, CRN 16112 (3 credits) W, 4:10 p.m. - 7:00 p.m.
This course explores the science behind the environmental issues that bear on the policy process at local, national and global scales. It delves into the science of selected environmental issues that have either arisen from anthropogenic activities, or that impact social systems, or that help policy makers understand the consequences of different policy options. The course will consist of readings and discussions of timely topics and one major project.  
Professor Sahagian

ES 433-10 International Environmental Law & Policy, CRN 17647 (3 credits) (SS) T, 4:10 p.m. - 7:00 p.m.
This course examines the basic international legal setting for the protection and management of the global environment. It examines how international law concerning nature is made and applied, the role of international environmental regimes or institutions, enforcement strategies, and compliance mechanisms. Emphasis will be placed on a review of various regulatory regimes for the protection of the global commons, including the history and legal sources of the Global Climate Change Convention.  
Professor Gillroy

ES 483-10 Independent Study (1-4 credits)
Section 11, CRN 18248 Professor Gillroy
Section 12, CRN 18249 Professor Holland
Section 13, CRN 18250 Professor Sahagian
Section 14, CRN 18251 Professor Casagrande

ES 490-10 Thesis, (1-6 credits)
Section 10, CRN 16125 Professor Gillroy
Section 11, CRN 16246 Professor Holland
Section 13, CRN 16248 Professor Sahagian
Section 14, CRN 18034 Professor Casagrande

ES, POLS 497-10 Urban Environmental Policy Workshop, CRN 18035 (3 credits) R, 4:10 p.m. - 7:00 p.m.
An environmentally-focused design course in urban politics and planning, the class will work with community clients to address an environmental policy question or challenge. In 2014, students will explore the topic of trash hauling in Bethlehem, evaluating the pros and cons of the current approach as well as several alternatives, using various criteria. Course activities include: conducting individual interviews, running focus groups, attending community meetings, synthesizing primary and secondary data, and presenting findings to clients and the community.  
Professor Pooley

ES 498-10 Philosophy, International Law & Policy Design, CRN 18872 (3 credits) (SS) M, 4:10 p.m. - 7:00 p.m.
Beginning in the 13th Century, this seminar traces the various philosophical, historical, and policy design arguments that have been used to explain, justify, and influence the evolution of the rule of law between nations (ius gentium). Using foundational writings we will trace the European genesis of international law in Natural, Cannon, and Roman Law (ius commune) during the Middle-Ages, the implications for transnational law caused by the Reformation, the policy argument for the Treaties of Westphalia, the efforts of the Enlightenment to create a secular base for the development of an international rule of law and the rise of the theory of Positivism with the practice of Multilateralism from 1815 to the present. Finally, with this background, we will speculate as to the future prospects for international legal rules, processes, principles, and institutions in the face of Globalization especially concerni