Advanced Seminar in Climate Change and Health
Date/Time: Friday 10:00-11:50AM; Location: CNR 1034

<table>
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<th>DEPARTMENT:</th>
<th>Environmental Health</th>
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<td>COURSE NUMBER:</td>
<td>EH586</td>
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<td>CREDIT HOURS:</td>
<td>2</td>
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<td>COURSE TITLE:</td>
<td>Advanced Seminar in Climate Change and Health</td>
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<td>PREREQUISITE:</td>
<td>EH/GH582 or instructor permission</td>
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<td>SEMESTER:</td>
<td>Spring 2012</td>
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INSTRUCTORS
Prof. Justin Remais (Office: 2023 CNR)
Prof. Jeremy Hess

INSTRUCTOR CONTACT INFORMATION
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MAILBOXES: EH Department, 2nd floor CNR
OFFICE HOURS: By appointment

COURSE DESCRIPTION
This course builds on the introduction to climate change and health course (EH/GH582), exploring the interaction of methodological and policy issues surrounding the public health effects of climate change. Methodological topics will include advanced modeling issues, epidemiologic methods, bias, remote sensing, issues of measurement error and uncertainty analysis. Meanwhile, policy discussions will emphasize how scientific evidence based on these methods is injected into policy debates. Topics will include issues of scientific consensus, objectivity, uncertainty and the ethics of scientist advocacy. The course will cover the impact of environmental change on the practice of environmental epidemiology; problems and opportunities in using models to project impacts; the necessity of, and strategies for, interdisciplinary work; strategic concerns in emerging areas of public health practice; challenges deriving policy on issues of great importance and cost; the role of health scientists in determining adaptation funding priorities, technology transfers and global treaties; and applied public health tools, including vulnerability assessments and health impact assessments.

SCHOOL LEVEL AND DEPARTMENT COMPETENCIES
- Use analytic reasoning and quantitative methods to address questions in public health and population-based research
- Describe environmental conditions, including biological, physical and chemical factors, which affect the health of individuals, communities and populations
- Apply the principles of epidemiology to assess health effects of environmental exposures
- Describe the use of epidemiology methods to study the etiology and control of disease and injury in populations
- Discuss how health policy and finance affects the delivery, quality, access and costs of health care for individuals, communities and populations
- Assess the major forces that influence the health of populations around the world.
LEARNING OBJECTIVES

The goal of the course is to develop a sophisticated understanding of the challenging interface between climate change and health science and policy, and to gain experience with traditional and emerging public health methods to investigate and respond to the public health consequences of global climate change. Objectives include:

- Review and critique the application of epidemiological and other research methods to ascertain the relationships between climate and health, and to project the health effects of climate change.
- Characterize the role of health science in shaping global and national debates over climate adaptation and mitigation policies.
- Review the significance of uncertainty in both establishing climate-health relationships, and in informing climate change policy responses.
- Explore the public health response to climate change from several, sometimes competing, perspectives, including health, energy, and economic sectors.
- Develop skills in study design and critique, literature search and review, synthesis, public speaking and presentation development, and collaborative work on interdisciplinary topics.
- Synthesize learning in these areas in an oral presentation reviewing a topic at the interface of climate science, health and policy.

EVALUATION

The course will be graded, and the grade determined by a combination of class participation, leading two critical reviews of peer presentations, and leading a class session on a topic mutually agreed upon by instructors and students.

Grades will be assigned based on the following formula:

- Class participation: 25%
- Writing critical reviews of peer presentations: 25% (2 reviews at 12.5% each)
- Leading class session: 50%

Class participation will be assessed by the instructors and will be based on the student's attendance, preparation for class, contributions to class discussions, in-class questions, and participation in group discussions and activities.

If you will miss a class, you must notify the instructor in advance of your absence. At the next class attended after the missed session, the student will present (~7-10 minutes) on a topic mutually agreed upon by the student and instructor.

Students will write a critical review of two in-class presentations (described below). The goal is for students to provide constructive, well-founded critical input on a class session led by their peers. More information on the formatting and content expectations of critical reviews will be available in the first few weeks of class.

Finally, in a group of two, students will lead one class session on a topic mutually agreed upon by the students and instructors. Leading the session will include selection and assignment of class readings, a presentation critically discussing the topic including a detailed treatment of the assigned readings, and a student-facilitated discussion about the methodological, policy or other issues raised. Topics might include a review of the use of scientific evidence to support (or oppose) a major climate-related public policy, a detailed discussion of a particular analytical method (e.g., its strengths and limitations) as applied to a specific climate-related health effect, or an exploration of methods to estimate the carbon footprint of consumer goods. Examples of previous session topics include a health impact assessment of large energy projects, e.g. hydroelectric or nuclear; evidence-based prioritization of adaptation activities for a particular country; methods used to project heat and heat wave exposure and health outcomes; methods for characterizing and accounting for acclimatization; etc. More details about the specific requirements of the final presentation will be available early in the semester.

ACADEMIC HONOR CODE

The RSPH requires that all material submitted by a student in fulfilling his or her academic course of study must be the original work of the student.