

(MULT) EHS 217 and PP 217  
Graduate Seminar in Environmental Economics and Policy

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Instructor: R. Jisung Park

Units: 4

Open to: MS, MPH, MPP, PhD students in Environmental Health Sciences and Public Policy (in exceptional cases, upper-class undergraduates may petition to enroll)

Class Time and Location: W 2-4:30pm, 71-257 CHS

Professor Office Hours: T R, 1pm-1:45pm (6319 Public Affairs); W 4:30pm-5:15pm (73-251 CHS)  
([CLICK HERE TO SCHEDULE APPOINTMENTS](#))

## Overview

This graduate-level seminar introduces students to the frontier of applied scholarship in environmental economics and policy. The primary objective of the class is to enable students to become more proficient consumers and producers of social science research that explores questions of environmental policy and sustainability broadly construed.

Major topics covered may include: health and economic impacts of climate change, adaptation to climate change, efficient and equitable design of environmental policies (e.g. cap and trade, carbon taxes), health impacts of air pollution and toxic chemicals, the role of business in sustainability, and interactions between environmental health and economic inequality.

This course requires substantial independent study and research outside of class time, particularly in the form of in-depth reading of assigned articles, weekly (1-page) written assignments, and directed individual research projects. Students should anticipate to spend at least 3-4 hours each week on these assignments, in addition to ongoing independent research for students' research proposal presentations and final written proposals. As such, it is listed as a 4-unit course even though we will meet as a class for 3 hours each week.

## Learning Objectives

This course is designed to help students:

- Critically assess a given literature that seeks to advance our knowledge of the contemporary environmental problem (e.g. climate change adaptation).
- Formulate clear, testable research questions, identify appropriate data sets, and design a credible causal estimation strategy as part of an empirical research proposal.
- Develop public presentation and speaking skills.
- Synthesize and summarize the policy-relevant stylized facts of a given literature, including potential limitations of existing findings.
- Listen to and critique research by some of the world's leading environmental economists and policy analysts in a seminar setting.

## ASPH Competencies

ASPH Competencies covered by this course include:

A1. Retrieve and organize literature; synthesize and critically evaluate scientific literature in environmental health, public health and other relevant fields.

A2. Use existing databases to provide background information or data to address research questions and draw appropriate inferences/estimates from environmental health data.

A3. Evaluate seminars and presentations in environmental health and distill the critical and salient issues from them.

C1. Use computer systems and analytic software packages.

C2. Produce working tables, statistical summaries, and effective figures to summarize data.

E1. Prepare presentation materials including outlines, posters, and Powerpoint presentations.

E2. Deliver effective oral presentations individually and as part of a team.

E3. Explain and interpret research findings for students, professionals, the public, and media.

## Class Organization and Assignments

Class will be organized around reading-based discussions. The former will focus on key research papers at the frontier of the field in that topic area. Usually this will comprise one review article plus one in-depth research article – both of which will require close reading prior to class. The objective here is to equip students with the ability to critically evaluate academic scholarship, as well as the ability to synthesize and succinctly communicate findings to a policy audience. Each week, students will be expected to submit a 1-2 page summary of the assigned in-depth research article, answering each of the guiding questions provided below.

Students will be expected to develop a detailed empirical research proposal (8-10 pages), which will be handed in at the end of the quarter. As part of the research process, students will also be asked to give short presentations (15-20 minutes) on their proposal. Presentations will mimic the format of typical applied research seminars, where participants are encouraged to engage critically with questions throughout the talk. The goal is to become more familiar with the process of formulating a concrete research question and a plan of empirical execution, as well as to hone public presentation and speaking skills.

## Prerequisites

This graduate level seminar is open to all graduate students who have taken some statistics and who have an interest in economic research and policy relevant to human and environmental health. Preferably, they will have taken some introductory economics. (Exceptions are possible in cases where students have advanced bio-statistics or epidemiological training.) At the start of the quarter, students should have a few potential topics they want to explore and write in the context this course.

## Topical Outline

Readings for which summary reports will be required are denoted in bold.

- Economics of climate change (a): the new climate impact literature  
REQUIRED READING: Heal and Park (2016), **Dell et al. (2012)**  
Optional: Burke et al. (2015), Greenstone et al. (2013), Dell et al. (2014), Hsiang et al. (2017), Zhang et al. (2016), Risky Business: Economic Risks of Climate Change in the United States.
- Economics of climate change (b): health and adaptation  
REQUIRED READING: **Barreca et al. (2016)**, Kahn (2016)  
Optional: Behrer and Park (2017), Burke and Emerick (2016), Mendelsohn et al. (1994), Annan and Schlenker (2015).
- Economics of climate change (c): efficient and equitable policy design  
REQUIRED READING: Goulder and Parry (2008), **Hsiang et al. (2018)**  
Optional: Schmalensee and Stavins (2017), Fankhauser et al. (2010), Meng (2017)
- Air quality (a): estimating the costs of clean air regulation (Developing countries):  
REQUIRED READING: Duflo et al. (2008), **Ebenstein et al. (2017)**  
Optional: Ebenstein et al. (2015), Hanna and Oliva (2015)
- Air quality (b): estimating the potential benefits of clean air regulation (US)  
REQUIRED READING: Deschenes et al. (2017), **Graff-Zivin and Neidell (2012)**.  
Optional: Heyes et al. (2016), Chang et al. (2016), Dechezleprêtre and Sato (2017), Sullivan (2016), Walker (2011).
- Environment, health, and human capital  
REQUIRED READING: Graff Zivin and Neidell (2013), **Goodman et al. (2018)**  
Optional: Larr and Neidell (2016), Zivin and Shrader (2016), Hanna and Oliva (2016), Park (2018) Mendell and Heath (2005)

(TWO OF THE FOLLOWING TOPICS, BASED ON CLASS DEMAND)

- Health, Income, and the Value of Statistical Life  
REQUIRED READING: Viscusi and Aldy (2003), **Chetty et al. (2016)**  
Optional: Sen (2005)
- Economic Inequality and Environmental Justice  
REQUIRED READING: Currie et al. (2015), **Currie (2011)**
- Traffic Externalities, Congestion Pricing, and Urbanization:  
REQUIRED READING: **Duranton and Turner (2011)**, Glaeser (2011)  
Optional: Glaeser and Kahn (2010)
- Final presentations + feedback + submission of final research proposals

## Course Organization and Logistics

Prior to each class, students will be expected to read the relevant synthesis article and an assigned research paper. Class will be organized around key discussion prompts, including:

- “What is the relevant policy context of this research?”
- “What are the research questions being asked?”
- “What is the underlying model of economic behavior/market failure?”
- “What data is being used? How was it collected?”
- “What is the empirical strategy? What are the key assumptions required in interpreting the identification as causal?”
- “How would you characterize the primary findings in two sentences?”
- “What are some potential weaknesses and limitations of the approach? How general are the findings?”
- “What if any implications - whether on grounds of economic efficiency, distributional equity, or policy design - might be drawn from this research?”

### Grading

Class Participation: 20%

Homework (1-page paper summaries): 25%

Preliminary Research Sketch: 5%

Final Research Presentation: 20%

Final Research Proposal (8-10 pages): 30%

## Course Readings

There is no required textbook for this course. However, for those interested in mastering the basics, Kolstad et al. (2011) is a great resource (Available on Amazon).

Journal articles that will be required for this course are listed at the end of this syllabus. They will be discussed in class extensively. Students are expected to understand the main points of these articles as they relate to the topics discussed in class, as well as the methodological approaches taken, including potential weaknesses and limitations. Students will not be held responsible for the mathematical theory sections or the statistical appendices of these articles. All of these articles will be available on the course (CCLE) website.

## Research Proposal and Presentation

As the final project for this class, students will write an 8-10 page research proposal on a topic of their choosing. The intention is to mimic, as closely as realistically possible within a 10-week course, the process by which a rigorous, policy-relevant research project would be devised, presented for feedback and re-evaluation, and executed empirically. As such, students will be asked to provide, in succession:

1. A short, 1-page research sketch (5% of final grade) DUE OCTOBER 18, 9am
2. A 15-minute research presentation (20% of final grade) BEGINNING WEEK 7
3. An 8-10 page final research proposal (30% of final grade) DUE DECEMBER 5, 9am

The emphasis will be on careful empirical research design and clear communication, as opposed to actually completing a full data-driven research project.

## Additional Logistics

**Office Hours:** Office hours will be held on Wednesdays noon-1pm and 4-5pm in FSPH 73-251. Please sign up using this link.

**Americans with Disability Act:** The Americans with Disability Act requires that reasonable accommodations be made for any student with a disability. If you need assistance, notify me immediately. For more information, visit the Center for Accessible Education website: <https://www.cae.ucla.edu/>.

**Late Work Policy:** There is no late policy. Students should notify the professor ahead of class if they are ill or if there is some other unforeseen event. In the event that something arises, we can make a plan for a due date. However, this all has to be done in advance of the original due date. In the case of illness, we will figure out a new due date depending on the intensity of the illness, etc. Otherwise, late assignments will receive a zero grade.

## References

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