ECON 9320. Environmental and Resource Economics II
Spring 2017
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Office Hours: Tuesday 1:00 – 3:00 or by appointment or by chance

Course Description

This class is one of two in the environmental economics field. The classes can be taken in any order.

This class will look at public goods and externalities in the context of environmental and natural resource problems. It will consider policy tools and other institutions for addressing these effects. It will also consider the problem of estimating people’s demand for environmental goods, necessary information for some policy approaches. Finally, it will consider applied evaluation of some policies.

The course’s objectives are to introduce you to environmental problems and policy solutions, to teach state-of-the-art econometric procedures for designing and evaluating policies, and to give you practice in the activities of professional research economists.

Required texts

The following texts are required:


The following text is recommended but not required:


In addition, there will be numerous readings assigned. Hard-to-come-by readings will be available on the Desire2Learn page.
Grades

- take-home midterm  25%
- class participation  30%
- referee report (2-6 p.)  10%
- research proposal (15-25 p.)
  - intermediate deadlines  5%
  - final paper  30%

Note on class participation

While some days will be predominantly lecture-based, others will be based on seminar-style discussion of a paper or group of papers. On these days, students will be called on at random to present a 10-15 minute overview of the paper, after which we will have a group discussion. Thus, class participation is a critical part of the semester.

Readings marked with a double-star (**) are designated as student-led discussion. But students are expected to be able to contribute to discussion for all papers marked with a * as well.

Note on writing assignments

We will have two writing assignments. The first assignment is a referee report. You must pick a recent (within three years) working paper to review. Excellent places to find such papers include:

- the NBER environment/energy group
  http://www.nber.org/papersbyprog/EEE.html;
- the NBER environmental meetings
  http://www.nber.org/summer-institute/ → choose a year and select the <eee> line;
- Resources for the Future (RFF)
  www.rff.org/research → look for documents labeled Discussion Paer
- Fondazioni Eni Enrico Mattei (FEEM)
  http://www.feem.it/getpage.aspx?id=73&sez=Publications&padre=20&tab=1

But you are not limited to these. If you are thinking strategically the paper will be related to your own research proposal (see below).

You must prepare a 1-page cover letter to the imaginary editor for whom you are reviewing the paper, summarizing the paper, evaluating its contribution and merit, and offering advice on accepting or rejecting the paper. Separately, you must provide constructive comments to the author.

Second, we will prepare a research proposal. It must relate to the environment in some way. If it relates to another paper from another class, there must be some "value added."
The research proposal can be thought of as a building block to a real paper. As an exercise, it could also be thought of as practice for a grant proposal or your own dissertation proposal. It should pose a well-defined research question, motivate it from the literature and/or policy problems, and provide a conceptual framework for thinking about the question – with a theoretical model and/or detailed empirical model. Then it should outline the steps that would be required for conducting the research, including the data that would be needed, and outline a plan for carrying it out. Finally, it might, if possible, have some preliminary work – perhaps summary statistics and rough cuts at the raw data (a comparison of means before and after an event, for example).

You will have intermediate deadlines of (i) choice of topic; (ii) 3 p. overview, with research question, 5+ citations to literature, statement of your contribution, and identification of data (if relevant).

Writing assignments will be graded on your analysis, your application to questions of policy and academic interest, and your writing. The Writing Studio is a valuable resource for students who need help with their writing. All final writing assignments will be distributed to the entire class.

**Deadlines**

The deadlines for these assignments are as follows:

*On or Before...*
Feb 3 -- meet with me to discuss your research paper & your choice of paper to review
March 3 -- referee report due to me by 5 PM (email is fine)
March 10 -- take home exam distributed in AM and due by 5 PM (under my door or by email)
March 24 – 3 p. version of research proposal due by 5 PM
April 28 -- final paper due to me & entire class by 5 PM

Presentations during exam week

**Academic Honesty.** Please see the Policy on Academic Honesty (Section 409).

**Course Outline**

**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Journal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AER</td>
<td>American Economic Review</td>
</tr>
<tr>
<td>JEEM</td>
<td>Journal of Environmental Economics and Management</td>
</tr>
<tr>
<td>JEL</td>
<td>Journal of Economic Literature</td>
</tr>
<tr>
<td>JPE</td>
<td>Journal of Political Economy</td>
</tr>
<tr>
<td>QJE</td>
<td>Quarterly Journal of Economics</td>
</tr>
<tr>
<td>REEP</td>
<td>Review of Environmental Economics and Policy</td>
</tr>
<tr>
<td>RESTAT</td>
<td>Review of Economics and Statistics</td>
</tr>
</tbody>
</table>

**indicates student-led discussion**
**indicates otherwise highest priority reading**
○ indicates optional reading
### Introduction

**Jan 9**  
Introduction to environmental economics

* Freeman et al., Ch. 1.


### Externalities and Public Goods

**Jan 11**  
Theory of externalities

* Cornes & Sandler Chs. 3-4.


**Jan 16**  
No Class: MLK Day

**Jan 18**  
Non-rivalry, excludability, and Samuelson's theory of public goods

* Cornes & Sandler Ch. 6.


**Jan 23**  
Commons and open access goods

* Cornes & Sandler § 8.4 - 8.5.

Jan. 25  No class today: Use the time to work on your research proposals.

Jan. 30  Club goods and the Tiebout model

* Cornes & Sandler Ch. 11


Feb 1  Introduction to policy instruments -- regulatory and Pigovian solutions

* Hanley et al., §4.1, 4.2, 4.4.


Feb 6  Spatial heterogeneity and Environmental Federalism Issues


Feb. 8  Coase and common law


Feb. 13  New institutional approaches


**Dynamics of Natural Resources**

Feb. 15, 20 Nonrenewable resources

* Hanley, Shogren, & White, Chs. 7-8.

http://home.uchicago.edu/~kelloggr/Papers/HotellingPressure_161127_JPE4.pdf


Feb. 22  Renewable resources: Fisheries & livestock

* Hanley, Shogren, & White, Ch. 9.


Feb 27  Estimation of dynamic efficiency costs


March 1  Renewable Resources: Forestry

* Hanley, Shogren, & White, Ch. 10.

**Welfare Economics**

March 6  Measures of individual welfare -- consumer surplus

* Freeman, Herriges, Kling, Ch. 3.


March 8 CS continued and WTP vs WTA


Spring Break

March 20 Welfare aggregation

* Slesnick 1998 (op cit.), §3.


March 22 Discounting


March 27  Uncertainty

* Freeman, Herriges, Kling, Ch. 5 (up to p. 151).


Nonmarket Valuation

March 29  Nonmarket valuation: Introduction

* Freeman, Herriges, Kling, Ch. 4.


April 3  Stated preference

* Freeman, Herriges, Kling, Ch. 12


April 5  Locational choice, property values, and hedonics: Introduction

* Freeman, Herriges, Kling, Ch. 10.

* H. Spencer Banzhaf, 2015, "Panel Data Hedonics: Rosen's First Stage and Difference-in-Differences as 'Sufficient Statistics" (Especially §3). http://www.nber.org/papers/w21485


April 10  Hedonics: Identification and endogeneity problems


April 12  Travel cost models and outdoor recreation

* Freeman, Herriges, Kling, Ch. 9


April 17  Averting behavior and health valuation

* Freeman Ch. 7, especially pp. 211-27.

**Olivier Deschênes, Michael Greenstone, and Joseph S. Shapiro, 2016, "Defensive Investments and the Demand for Air Quality: Evidence from the NOx Budget Program," http://www.econ.yale.edu/~js2755/NOx_Defenses_DGS.pdf
April 19  Climate Adaptation


April 24  Green GDP and sustainability

* Hanley, Shogren, & White, Ch. 2.


Additional Notes

- The course syllabus provides a general plan for the course; deviations may be necessary.

- Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, please take time to fill out the online course evaluation.

- Students who wish to request accommodation for a disability may do so by registering with the Office of Disability Services. Students may only be accommodated upon issuance by the Office of Disability Services of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought.