Environmental and Resource Economics I  
ECON 9310  
Spring 2016  
Section 005 (CRN 17880): Mondays and Wednesdays, 3:00-4:15pm, Langdale Hall 321  
Professor: Garth Heutel  
gheutel@gsu.edu; (404) 413 0159; Twitter: @GarthHeutel  
Office: AYS 436  
Office Hours: Mondays and Wednesdays, 12:00pm-1:00pm  

Prerequisites: Econ 8100 and Econ 8120  

Catalog Description  
This course is part of a two-course sequence designed to provide students with a working knowledge of the most important models and analytical techniques used in the design of public policy for the management and conservation of natural and environmental systems; environmental benefits measurement; and dynamic models of natural resource management.  

Course Objective  
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 environmental context. 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.  

Method of Instruction  
ECON 9310 is taught through a combination of lecture, discussion, individual presentations, and examinations.  

Course Materials  
No textbook is required. However, lectures in the first few weeks of the course are based on chapters in *Microeconomic Theory* by Mas-Colell, Whinston, and Green (MWG), *Microeconomics* by Goolsbee, Levitt, and Syverson (GLS), and *Microeconomic Theory: Basic Principles and Extensions* by Nicholson and Snyder (NS), 10th edition. Those books are recommended.  

Much of the reading will be journal articles that are available online via the university library. If anything is unavailable via the library, I will make it available on Brightspace (please let me know if there is something that you cannot find).  

Access to GSU’s learning management system, Brightspace, formerly called Desire2Learn (D2L), is required. It is recommended that students check the Brightspace course website at least once between class meetings. Students may set up notifications in Brightspace so that they are automatically alerted to new Brightspace emails and announcements. Brightspace can send such notifications to an email account of their choice or via text messaging. Student help for Brightspace can be found here: [http://gsuideas.org/files/d2l/learner/en.1.html](http://gsuideas.org/files/d2l/learner/en.1.html)
It is critical that students have access to a reliable internet connection throughout the semester, especially because of the required online material. There are multiple computer labs on campus that students may use; see [http://technology.gsu.edu/technology-services/it-services/labs-and-classrooms/computer-labs/](http://technology.gsu.edu/technology-services/it-services/labs-and-classrooms/computer-labs/) for more information about locations and hours.

**General Course Outline**
We will cover these topics:
Theoretical foundations of environmental economics
The distribution of the costs of environmental policy
The distribution of the benefits of environmental policy
Environmental policy design
Private provision of public goods
Dynamic models and integrated assessment models
Behavioral economics and the environment

**Grading Policy**
See the table for details on how grades will be determined.

<table>
<thead>
<tr>
<th>Component of Grade</th>
<th>Weight</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm exam</td>
<td>20%</td>
<td>Monday, February 8th</td>
</tr>
<tr>
<td>Presentation of published paper</td>
<td>15%</td>
<td>2/22, 2/29, 3/7, and 3/9</td>
</tr>
<tr>
<td>Referee report of working paper</td>
<td>10%</td>
<td>Wednesday, March 9th</td>
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<tr>
<td>IAM simulation</td>
<td>10%</td>
<td>Wednesday, March 30th</td>
</tr>
<tr>
<td>Original research paper</td>
<td>30%</td>
<td>Wednesday, April 13th</td>
</tr>
<tr>
<td>Presentation of original research paper</td>
<td>10%</td>
<td>4/13, 4/18, 4/20, 4/25, 5/2</td>
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<tr>
<td>Attendance and Participation</td>
<td>5%</td>
<td>Daily</td>
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<tr>
<td>Total</td>
<td>100%</td>
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The overall course grade is calculated in Brightspace, and at any point in the semester, students may see their current overall grade in Brightspace. Overall course grades are rounded to the nearest hundredth of a percent (two decimal points). End-of-semester letter grades will be assigned based on the overall course percentage grade according to the following:

- 100.00% and higher: A+
- 94.00% – 99.99%: A
- 90.00% – 93.99%: A–
- 87.00% – 89.99%: B+
- 84.00% – 86.99%: B
- 80.00% – 83.99%: B–
- 77.00% – 79.99%: C+
- 74.00% – 76.99%: C
- 70.00% – 73.99%: C–
- 60.00% – 69.99%: D
- 59.99% and lower: F
Although unlikely, a curve may be imposed at the discretion of the instructor. If so, grades will only be curved upwards and never downwards. Thus, a curve will never hurt you and may help you. However, you should not count on there being a curve.

**Midterm Exam**
The midterm exam will be held in class on **Monday February 8**. It will be on paper, and no notes, books, laptops, cellphones, calculators, or other materials are allowed.

Georgia State University and the Department of Economics have strict expectations of academic integrity. For any exams/quizzes administered online, it is expected that such exams/quizzes be the student’s independent, individual work without assistance. Assistance from any persons, notes, books, consultations, groups, electronic devices, previous course exams, or any other sources is strictly prohibited and considered to be a breach of academic honesty. A breach of academic honesty has serious consequences including expulsion. The University’s academic honesty policy can be read here: [http://deanofstudents.gsu.edu/student-conduct/academic-honesty-policy/](http://deanofstudents.gsu.edu/student-conduct/academic-honesty-policy/)

All free-response, essay, and short-answer questions are expected to be written in the student's own words.

There will be absolutely no make-up exams. A missed midterm will count as a zero.

**Presentation of Published Paper**
Each student will be assigned to lead the class discussion for 25 minutes of one class period. This amounts to reading the paper assigned for that day, preparing a presentation of the paper, and leading a class discussion. Slides are strongly recommended, and handouts are optional. Each student will choose a paper from the list of readings or of his or her own choosing, subject to the instructor's approval (do not choose one of the required papers with an asterisk next to it). Choose a presentation paper and have it approved by me no later than **January 27th**. The presentations will be held on **February 22, February 29, March 7, and March 9**. The order of presentations will be determined after the papers have been selected, based on their topics.

**Referee Report of Working Paper**
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](http://www.nber.org/papersbyprog/EEE.html))
- the NBER environmental meetings ([http://www.nber.org/summer-institute/](http://www.nber.org/summer-institute/), choose a year and select the <eee> line

But you are not limited to these. If you are thinking strategically the paper will be related to your own research paper (see below). Choose a working paper and have it approved by me no later than **February 17**. The assignment is due on **Wednesday March 9**.

You must prepare a ½ to 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, in an anonymous report about 2-3 pages in length.

I will post sample referee reports.

**IAM Simulation**
You will work with the Matlab code for DICE, an integrated assessment model, to conduct sensitivity analysis over a simulation of optimal climate policy. You will write up a brief 1-2 page summary of your results, plus graphs and/or tables. More details on this assignment will be made available later in the semester. The deadline is **Wednesday March 30**.

**Original Research Paper**
A paper on the topic of your choosing is due on **Wednesday April 13**. This paper should include a review of the literature relevant to your chosen topic and the groundwork for an original research idea, including a preliminary empirical analysis. The topic should come from environmental economics. For the literature review, define the problem or question, summarize how other papers have addressed the question and how they have answered the question, identify any weaknesses in the literature, and identify gaps or areas of further study. Then, propose a research plan for an original project related to the literature. There is no page length requirement, but between 20-30 pages (12 point font, double spaced, 1-inch margins) is appropriate.

Plan on meeting with me individually at the beginning of February to discuss possible paper topics. Your topic must be approved by me no later than **February 17th**. In class on **February 17th**, each student will present a brief (1-2 minute) outline of his or her paper topic.

Plan on meeting with me individually in the middle of March to discuss the progress of your paper. If you want to, you may turn in a rough draft before March 30.

**Presentation of Original Research Paper**
On the last several class days and on the final exam date, each student will present (30 minutes) his or her final paper. The order of presentation dates will be assigned at random.

**Attendance and Participation**
Attendance is mandatory. The University's attendance policy can be read here: [http://catalog.gsu.edu/graduate20152016/university-academic-regulations/#class-attendance](http://catalog.gsu.edu/graduate20152016/university-academic-regulations/#class-attendance)

You are expected to participate in class discussions, for which it will be necessary to read the assigned paper(s) ahead of class.

**Twitter**
I occasionally use Twitter to post about news that is relevant for the course. If you want to, you can follow me at @GarthHeutel. Students can also ask and answer course-related questions on Twitter.

**Important Notes:**
1. The course syllabus provides a general plan for the course; deviations may be necessary.
2. All students are responsible for knowing and adhering to [GSU’s Policy on Academic Honesty](http://catalog.gsu.edu/graduate20152016/university-academic-regulations/#class-attendance) as published in [Student Code of Conduct Handbook](http://catalog.gsu.edu/graduate20152016/university-academic-regulations/#class-attendance).
3. 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.

4. 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.

5. Students who withdraw after the midpoint of each term will not be eligible for a “W” except in cases of Emergency Withdrawal.

6. Important University dates can be found at [http://registrar.gsu.edu/registration/semester-calendars-exam-schedules/](http://registrar.gsu.edu/registration/semester-calendars-exam-schedules/)

7. Georgia State University values diversity and is committed to fostering and maintaining an educational environment which appreciates individual differences in all areas of operation including classroom instruction, texts, and materials. To this end, any actions, practices, or processes by any faculty, staff person, or student that discriminates against or is prejudicial toward any person or group based on race, gender, age, religion, ethnicity, nationality, disability, sexual orientation, or socioeconomic status will not be tolerated.

Miscellaneous Requests/Advice:

- No talking to your neighbors during class, even if you are discussing the class. If you have questions raise your hand, or wait to ask them during office hours.
- No cell phone/tablet/texting during class.
- I prefer that you do not use laptops during class. But, if you prefer, you may use them during lectures only to reference the papers that we are discussing.

Calendar:

Please complete the assigned reading for each day before the day's lecture. Papers denoted with an asterisk are required reading; all other readings are recommended.

Monday January 11
Edgeworth Exchange Economies
Reading:
MWG 15.B

Wednesday January 13
Production in GE models
Reading:
MWG 15.C and 15.D

Monday January 18
MLK Day; no class

Wednesday January 20
Fundamental Theorems
Reading:
MWG 16.B-16.D

Monday January 25
Externalities
Reading:
MWG 11.B
GLS 16.1-16.2

Wednesday January 27
**Deadline for choice of presentation of published paper**
Externalities
Reading:
MWG 11.B
GLS 16.1-16.2

Monday February 1
Public Goods
Reading:
MWG 11.C
GLS 16.4

Wednesday February 3
Externalities and Public Goods
Reading:

Monday February 8
**Midterm Exam**

Wednesday February 10
The Distribution of Costs of Environmental Policy
Reading:


Parry, Ian and Roberton Williams, "What are the Costs of Meeting Distributional Objectives for Climate Policy?" *B.E. Journal of Economic Analysis and Policy, Symposium* 10(2), 2010.

Monday February 15
The Distribution of Costs of Environmental Policy
Reading:


Wednesday February 17

**Deadline for choosing working paper for referee report**

**Deadline for topic of original research paper**

The Distribution of Benefits of Environmental Policy

Reading:


Monday February 22
**Student Presentations – Published Paper**

Wednesday February 24
**Environmental Policy Design**

Reading:


Monday February 29
**Student Presentations – Published Paper**

Wednesday March 2
**Environmental Policy Design**

Reading:


Monday March 7
**Student Presentations** – **Published Paper**

Wednesday March 9
**Deadline for Referee Report**
**Student Presentations** – **Published Paper**

Monday March 14
**Spring break; no class**

Wednesday March 16
**Spring break; no class**

Monday March 21
**Dynamic Models and Integrated Assessment Models**

Reading:


Wednesday March 23

Dynamic Models and Integrated Assessment Models

Reading:


Monday March 28
Dynamic Models and Integrated Assessment Models
Reading:


Wednesday March 30
Deadline for IAM Simulation
Private Provision of Public Goods
Reading:


Monday April 4

Private Provision of Public Goods


Monday April 11
Behavioral Economics and the Environment


Ayres, Ian, Sophie Raseman, and Alice Shih. "Evidence from two large field experiments that peer comparison feedback can reduce residential energy usage.” Journal of Law, Economics, and Organization 29, no. 5 (2013): 992-1022.


Wednesday April 13
**Deadline for Original Research Paper**
**Student Presentations – Original Research Paper**

Monday April 18
**Student Presentations – Original Research Paper**

Wednesday April 20
**Student Presentations – Original Research Paper**

Monday April 25
**Student Presentations – Original Research Paper**

Wednesday April 27
**No class**

Monday May 2
(Final Exam period – 1:30pm-4:00pm)
**Student Presentations – Original Research Paper**