**57A – ENVIRONMENTAL ECONOMICS**

**FALL 2015**

**Course Overview:** This course is designed to provide an introduction to environmental economics. In particular, we will consider the impact of the economy on the environment. The first half of the course will be devoted to learning about the problems of market failure and the theory behind government responses to these problems. In the second half of the course we will look at the effect of these regulations in financial markets, workplace health and safety, development, and trade. Other topics we will cover will include cost-benefit analysis, the measurement of the benefits of non-market goods, and the costs of regulation.

**Course Goals:** By the end of this course, students should understand the major causes of market failure that arise due to environmental problems; know the theoretical solutions for those market failures; and understand what is required for the practical resolution of environmental issues. Students should also have developed an appreciate for the both strengths and weaknesses of an economic approach to solving environmental problems.

**Course Meeting Times:** M/W 8-9:20 am.

**Office Hours:** M/W 9:30 a.m. - 10:30a.m., or by appointment.


**Course Requirements:** Mandatory attendance at lectures, the completion of course assignments, exams, and class presentations. Grading in the course will be as follows:

1. Assignments (20% of grade) – I will assign 6 assignments over the course of the semester. You are required to turn in all of these exercises. You must do these exercises on your own. *Assignments will be due in class (due dates are given in the syllabus). NO late assignments will be accepted.*

2. Exams (60%) - There will be 2 exams given during the semester.

3. Class participation (20%). This includes mandatory class attendance.

*Please note that there will be NO make-up exams given. Absence from an exam will be excused only for documented illness or family emergency. There are NO EXCEPTIONS to this policy.*

**Special Accommodations:** If you are a student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please see me immediately. Please keep in mind that reasonable accommodations are not provided retroactively.

**Academic Honesty:** You are expected to be honest in all of your academic work. Instances of alleged dishonesty will be forwarded to the Office of Campus Life for possible referral to the Student Judicial System. Potential sanctions include failure in the course and suspension from the University. If you have any questions about my expectations, please ask. Academic dishonesty will not be tolerated and will be vigorously prosecuted.

**Cell Phone and Laptop Policy:** The use of cell phones in class is strictly PROHIBITED. Please turn your cell phone off or put it on vibrate during lecture. Laptops may not be used in class without the professor's permission.
Policy on Homework Sets and Exams

1. Homework sets are designed to help you learn how to apply the material presented in lectures. You are permitted and indeed encouraged to discuss course material, including homework, with other students in the class. However, you are expected to turn in your own individual solutions for each homework set. Discussion with others is intended to clarify ideas, concepts, and technical questions, not to derive group homework set solutions. Identical homework set answers (especially when the steps used to derive answers are not shown or when questions of interpretation are involved) violate this policy and may receive no credit or occasion disciplinary action.

2. Handwritten solutions are fine, so long as they are legible and neat. Please remember: if we can’t read it, we can’t grade it.

3. In fairness to students who complete assignments on time, late homework sets will not be accepted. You must turn in assignments during the lecture on the day they are due or earlier in the day to my mailbox. Please note that assignments left under my office door will be discarded.

4. During exams, you may consult the proctor administering the exam if you need clarification of exam questions. No discussion or other form of communication with anyone else will be permitted after the exams have been handed out, until all students have turned in their exam books. Students found to have cheated or engaged in any other unethical behavior will be given a grade of F on the examination involved, and will be turned over to the appropriate disciplinary committees within Brandeis University for further action.

If you have any questions regarding these policies, please raise them with me.
IMPORTANT DATES TO REMEMBER:

Sept 7    Labor Day. No class.
Sept 10   Brandeis Monday schedule.
Sept 14-15 Rosh Hashanah: No classes.
Sept 23   Yom Kippur: No class.
Sept 28   Sukkot. No class.
Sept 29   Brandeis Monday schedule.
Oct 5     Shmini Atzeret: No class.
Oct 14    Midterm #1, in class.
Nov 18    Midterm #2, in class.
Dec 2 - 9 Student presentations, in class.
Dec 9     Last day of class.

ASSIGNMENT DUE DATES:

Sept 10   Assignment #1 due, in class.
Sept 24   Assignment #2 due, in class.
Oct 12    Assignment #3 due, in class.
Oct 28    Assignment #4 due, in class.
Nov 11    Assignment #5 due, in class.
Nov 30    Assignment #6 due, in class.
**OUTLINE:**


Readings:  C&T Chapters 1, 2, 3.


Sept 2 Weds  Class cancelled.

Sept 7 Mon  Labor Day. No class.

Sept 9 Weds  Solutions to the environmental problem. Do we even need government intervention? Potential solutions: prices vs. quantities. Other possibilities.

Readings:  C&T Chapter 4, 5.


Sept 10 Thurs  More Solutions.

Assignment #1 due, in class.
Sept 14-15 Mon **Rosh Hashanah. No class.**

Sept 16 Weds **More Solutions.**

Sept 21 Mon **What do policy makers need to know to institute a solution to an environmental problem?** Consumer theory and valuation in theory and practice. Measuring benefits to consumers; revealed preferences; stated preferences. Value of a statistical life.

Readings: C&T Chapter 7.


Sept 23 Weds **Yom Kippur. No class.**

Sept 28 Mon **Sukkot. No class.**

Sept 29 Tues **Brandeis Monday: CLASS CANCELLED**

Sept 30 Weds **Measuring costs.** Production, pollution, output, and prices. What do we know?

Readings: C&T Chapter 8.


Assignment #2 due, in class.

Oct 5 Mon **Shmini Atzeret. No class.**

Oct 7 Weds **Discounting and Project Analysis.** Should we always go forward with environmental projects if benefits exceed costs? How to consider projects that occur over time.

Readings: C&T Chapter 9.

Oct 12 Mon **Risk Analysis:** How should we think about environmental policies that are aimed at reducing the risk of a bad environmental outcome? Risk versus uncertainty. Risk premia. Excess surplus, option prices, and option values.
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<tr>
<th>Date</th>
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<tr>
<td>Oct 14</td>
<td>Weds</td>
<td>Midterm #1, in class.</td>
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<td>Oct 19</td>
<td>Mon</td>
<td>Class cancelled.</td>
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<td>Oct 21</td>
<td>Weds</td>
<td>Resource Management: Non-Renewable Resources</td>
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<td>Oct 26</td>
<td>Mon</td>
<td>Resource Management: Renewable Resources</td>
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<td>Oct 28</td>
<td>Weds</td>
<td>Resource Management: Recyclable Resources</td>
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<td>Nov 2</td>
<td>Mon</td>
<td>U.S. Environmental policy: A History</td>
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<td>Nov 4</td>
<td>Weds</td>
<td>More U.S. Environmental Policy.</td>
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<td>Nov 9</td>
<td>Mon</td>
<td>Global environmental issues and international agreements</td>
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<td>Nov 16</td>
<td>Mon</td>
<td>Growth and the Environment, cont’d.</td>
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<td>Nov 18</td>
<td>Weds</td>
<td>Midterm #2, in class</td>
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<td>Nov 23</td>
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<td>Can “green” power save us from global warming? (Slides from Scott Taylor.)</td>
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<td>Nov 25-27</td>
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How do you end up with an environmental crisis, and, are we there yet?


Assignment #6 due, in class.

Re-evaluating the role of economic theory for protecting the environment.

Readings: Chapter 5, The Environmental Ethics & Policy Book (see Latte)

** students will lead the class discussion

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