

Syllabus, Eco B9526, Spring 2012

## **Economics of the Environment and Natural Resources**

cross listed as Economics of Sustainability SUS C7400

Tuesday Schedule below; 5-6pm in SH 17; 6:15-7:15 in SH 17; 7:20-8:20 in NAC 6313

### **Course Description**

How does the science of economics help to understand and moderate human effects on the environment? Economics examines how people make choices when their unlimited wants meet scarce resources. As human technology has developed far enough to bump up against the limits of the finite globe, we as policymakers and concerned citizens need to understand how to ensure that the finite resources of the globe can be sustained for the future.

### **Textbook**

*Environmental Economics and Natural Resource Management*, David A. Anderson, Routledge, 3<sup>rd</sup> ed. Available online from Amazon (it says "Kindle Edition" but can be read on many electronic devices) <http://amzn.to/y3AgQf>

### **Suggested:**

*Economics: A Very Short Introduction*, Partha Dasgupta – "very short" is also cheap, under \$10

*Oil 101*, Morgan Downey – a terrific read; all the vital basics for understanding oil

*Beyond Smoke & Mirrors: Climate Change and Energy in the 21<sup>st</sup> Century*, Burton Richter – excellent primer on climate change

### **Professor**

Kevin R. Foster, Department of Economics, The City College of New York,  
kfoster@ccny.cuny.edu, w: (212) 650-6201, m: (860) 593-7674, office hours Tuesday 11-noon and 3:30-4:30 or by appointment, <http://kfoster.ccny.cuny.edu>

### **Course Requirements**

This course requires students to complete regular homework assignments and write a midterm exam. It also requires that students, working in a small team, complete a final project. This final project is a substantial analysis of an environmental issue facing policymakers as well as a detailed exploration of the economics of proposed remedies. During class times after the midterm exam we will have presentations from each group (graded as homework).

### **Course Cross-Listing and Schedule**

Each week the first part of the course, primarily intended for SUS students, will review the necessary economic analysis. The middle part, for both SUS and ECO students, will concentrate on the application of this theory. The final part, primarily intended for ECO students, will extend the analysis to more complicated topics. All students are recommended to attend all of the

sessions if schedule permits. SUS for basics, 5-6pm in SH 17; all 6:15-7:15 in SH 17; Econ for advanced 7:20-8:20 in NAC 6313

### **Educational Outcomes**

Students will integrate theory with public policy in areas of pollution regulation, emissions cap-and-trade, and tradable permits. Students will evaluate particular theories about the effectiveness of such strategies against empirical findings documented in studies from a variety of disciplines not limited to economics. Students will write a final project which exhibits their ability to compose excellent oral and written communications for diverse audiences.

### **Grading**

Course grades are determined by three factors: your grade on the final project, your score on the exam, and your scores on the homework assignments. The final project gets 60% weight while the exam has a 20% weight and homework also gets 20%. There is no BS factor of effort or any other unobservable will-o-wisps – the weightings sum to 100. Your grade is determined entirely on observed performance.

### **Course Material**

Homework and basic course documents will be on the class page, publicly accessible from my web page (<http://kfoster.ccny.cuny.edu>). Readings and some other material will be available on the Blackboard course page (login required). Some class material will be online videos. I will periodically send emails to the class via Blackboard so you must keep your CCNY email updated.

## Weekly Topics

Environmental Economics, Eco B9526, Economics of Sustainability SUS C7400

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Week	Date	Topics	Chapter(s) in text
1	Jan 31	Get up to speed with "The Basics"	online
2	Feb 7	Markets & Externalities	1, 2, 3
3	Feb 14	Production and Externalities	4, 5
	Feb 21	No class: CCNY on Monday schedule	
4	Feb 21	Public Goods: Excludability and Rivalry	6, 7
5	Feb 28	Coase Theorem: When do Markets Work?	8, 10
6	Mar 6	Social Welfare: Present and Future; Sustainability; Risk	online
7	Mar 13	Government Policies: Command & Control, Cap & Trade, Tax	11
		Economics of Global Climate Change, Every group should read the articles by Stern and by Nordhaus in Science.	
		Group 1 should read and discuss Stern's Report Part I Chapter 2 and Part II Chapters 3 and 5, which outline the economic challenges.	
8	Mar 20	Group 2 should read and discuss Stern's Report Part III Chapters 9, 10, and 13, which detail the costs and benefits.	Online
		Group 3 should read and discuss Stern's Report Part IV Chapters 14 and 15, Part V Chapter 20, and Part VI Chapter 21.	
9	Mar 27	Urban Flooding	tba
10	Apr 3	Exam	comprehensive
	Apr 10	No class	
11	Apr 17	Presentations on Final Project	
12	Apr 24	Presentations on Final Project	
13	May 1	Presentations on Final Project	
14	May 8	Presentations on Final Project	
15	May 15	Presentations on Final Project	
		deadline for final project	

Chapters refer to *Environmental Economics and Natural Resource Management*, 3<sup>rd</sup> ed., David A. Anderson, Routledge.

## Other Readings:

Every student in the Sustainability program, as well as anyone else interested in Global Climate Change, ought to have read the IPCC report – if not every page then still all of the "Summary for Policymakers" portions as well as big chunks of the rest.

IPCC AR4 Synthesis Report "Summary for Policymakers"

[http://www.ipcc.ch/publications\\_and\\_data/ar4/syr/en/spm.html](http://www.ipcc.ch/publications_and_data/ar4/syr/en/spm.html) or [http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr\\_spm.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf).

IPCC Working Group 1, [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/contents.htm](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.htm)

IPCC Working Group 2, [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg2/en/contents.html](http://www.ipcc.ch/publications_and_data/ar4/wg2/en/contents.html)

IPCC Working Group 3, [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg3/en/contents.html](http://www.ipcc.ch/publications_and_data/ar4/wg3/en/contents.html)

Other Readings on Global Climate Change

Stern, N. and C. Taylor (2007). "Climate Change: Risk, Ethics, and the Stern Review," *Science*, 317.

Nordhaus, W. (2007). "Critical Assumptions in the Stern Review on Climate Change," *Science*, 317.  
 Stern Review

Anderegg, W.R.L., J.W. Prall, J. Harold, S.H. Schneider (2010). "Expert Credibility in Climate Change," *PNAS*.  
 Tol, R.S.J. "The Economic Effects of Climate Change," *Journal of Economic Perspectives*, 23(2).  
 Yale Symposium on Stern Review, (2007).

Weitzman, M.L. (2009) "The Extreme Uncertainty of Extreme Climate Change: An Overview and Some Implications," working paper.

Weitzman, M.L. (2009). "Some Basic Economics of Extreme Climate Change," working paper.

Stavin, R.N. (2007) "A US Cap-and-Trade System to Address Global Climate Change," Hamilton Project Discussion Paper, Brookings Institution.

Aldy, J.E., A.J. Krupnick, R.G. Newell, I.W.H. Parry, W.A. Pizer (2010). "Designing Climate Mitigation Policy," *Journal of Economic Literature*, 48(4).

Deviations from the schedule will be announced in class.

The exam dates and project due dates are given above. You must take the exams at, and hand in the work by, the scheduled times. No excuses.

## Academic Integrity

*The CCNY Faculty Senate has recommended that every course syllabus include this notice:*

### **CUNY Policy on Academic Integrity**

As stated in the CUNY Policy on Academic Integrity: 'Plagiarism is the act of presenting another person's ideas, research or writings as your own. The following are some examples of plagiarism:

- 'Copying another person's actual words without the use of quotation marks and footnotes attributing the words to their source;
- 'Presenting another person's ideas or theories in your own words without acknowledging the source;
- 'Using information that is not common knowledge without acknowledging the source;
- 'Failing to acknowledge collaborators on homework and laboratory assignments.
- 'Internet plagiarism includes submitting downloaded term papers or parts of term papers, paraphrasing or copying information from the internet without citing the source, and "cutting & pasting" from various sources without proper attribution.'
- A student who plagiarizes may incur academic and disciplinary penalties, including failing grades, suspensions, and expulsion.
- A complete copy of the CUNY Policy on Academic Integrity may be downloaded from the College's home page.