

Environmental Economics Syllabus

Professor Leslie M. Marx

CC Term 6

Course Summary

This class will focus on the economic tools used to study environmental issues. The objective is to provide students with the economic tools needed to study environmental issues and to inform firm decision making in the presence of environmental regulation. We will cover the ways in which markets fail to efficiently allocate resources in the presence of externalities along with mechanisms that can be used to correct those failures, including tax-based solutions, such as emissions taxes, solutions based on the creation and design of missing markets, such as tradable emission permits, and solutions based on international cooperation governed by treaties. We will consider environmental questions facing firms such as: Can firms earn cost savings by reducing their environmental impacts? How should firms think about the task of being environmentally responsible? What is the potential for product differentiation along environmental lines? How can firms shape regulation to secure competitive advantage? Finally, we will analyze the incentives for firms to be environmentally friendly, the extent to which some firms have succeeded in being “green,” and whether it “pays to be green.”

The course will attempt to help students see how (a) they can successfully run a business without feeling like they are killing the planet; (b) deal with this challenge, however they feel about the environment; and (c) see how certain ways of dealing with it can lead industries to better equilibria.

Textbook

We will use the following book:

1. Nathaniel O. Keohane and Sheila M. Olmstead (2007), *Markets and the Environment*, Island Press.

As optional material, the following book is a nice collection of readings on environmental economics. I will provide several of the articles from this collection through e-reserves.

2. Robert N. Stavins (2005), *Economics of the Environment: Selected Readings, 5th Edition*, W. W. Norton & Company.

In addition, more mathematically inclined students may want to refer to:

3. Charles D. Kolstad (2000), *Environmental Economics*, Oxford University Press.

Topics

The course will be organized around four basic topics:

“The Environmental Problem”: Why might markets fail to protect the environment?

“Corporate Responsibility”: How should you as a manager deal with conflicting responsibilities to your firms and its shareholders and to the environment?

“Environmental Solutions”: How can voluntary mechanisms, tax-based solutions, and market-based solutions address environmental problems?

“Measurement”: How can one use data to quantify the demand for improved environmental quality?

Grading

Course grades will be based on the following components: class exercises and individual homework (20%), a mid-term exam (25%), a team homework (25%), and a team project involving a written report and a brief online presentation (30%). More details on each of these are provided below.

Class exercises and individual homework

There will be at least one graded in-class exercise during the residency and several short individual homework assignments.

Midterm exam

During the first week of the distance portion of the class, there will be an open-book midterm exam. You will have the entire week to complete the exam.

Team homework

During the distance portion of the class, there will be a team homework assignment in which you will use data to quantify the willingness to pay of a community for the clean-up of a hazardous waste site.

Team project

There will be an opportunity to discuss the details of the project during the residency. The deliverables are a report of no more than 10 pages (1.5 spacing, 12 pt font) and a brief online presentation to the class giving the highlights in PowerPoint format. The report is due on October 12, 2009. The online presentations will be during the final chat session. The presenter will need a good Internet connection and a microphone.

Each team will select a company that is involved in some kind of industry-wide effort to improve the environmental performance of firms in the industry. The team will describe the industry and the nature of the industry-wide environmental effort, including which firms are involved, what goals/standards/actions are involved, and incentives for participation. The team will also describe whether its chosen firm is taking any unilateral actions to improve its environmental performance. The team will form an opinion as to whether the efforts of the industry and firm: 1. have helped the environment, 2. have the potential to help the environment in the future, 3. have resulted in or can be expected to result in increased or decreased profit. The team will conclude its report with a statement as to whether it views the firm's and industry's efforts as well placed. In particular, do you recommend that the firm continue to participate in the industry effort?

I prefer that you choose a firm that is not directly related to an environmental cause, but rather a "regular company" that happens to be taking actions related to the environment. For example, Burt's Bees, which produces "Earth Friendly Natural Personal Care for The Greater Good," has environmental friendliness as part of its business plan. That is not what I had in mind for this project. Instead, consider a firm like Bank of America, which does not have environmentalism as an inherent part of its mission. Despite this, it has internal environmental programs such as cash back for employees who buy a hybrid, and it has participated in industry-wide initiatives, forming "green" coalitions with other banks. (Feel free to choose Bank of America as your project firm if it appeals to you. Also, I encourage you to use your own employer if it seems like a good match for the project.)

You may use any resources you like for this project, including print publications, the Internet, corporate documents, personal interviews or discussions, reports in the media, etc. You should provide appropriate attribution for your source materials. You are welcome to interview students outside your team if they have relevant information, but the report should be the work product of your team alone.

A one-page proposal of your project topic will be due at the end of the residency. That proposal should state the firm you will study and briefly describe the industry effort in which the firm is involved. The proposal should also give an overview of the sources of information you plan to use. In the distance portion of the class, each group will give a brief online presentation of their work. The final report is due at the end of the distance portion of the course. Each group will produce only one presentation and one final paper to be handed in by the group as a whole.

Key dates

August 13, 2009 (before midnight EST): carbon footprint component of the pre-assignment due

August 21, 2009 (beginning of class): one-page team project proposal due

September 1, 2009 (12:01am EST): midterm exam released

September 7, 2009 (before midnight EST): midterm exam due

September 8, 2009 (12:01am EST): individual introductory homework on the measurement of environmental demand released and team homework on the measurement of environmental demand released

September 14, 2009 (before midnight EST): individual introductory homework on the measurement of environmental demand due

September 28, 2009 (before midnight EST): team homework on the measurement of environmental demand due

October 3 and 10, 2009: project presentations during chat (PowerPoint due one day before your scheduled presentation)

October 12, 2009 (before midnight EST): project report due

There will be four weekend chat sessions, scheduled for 10:00-11:00am EST on September 12, September 19, October 3, and October 10.

We will use the discussion boards primarily to exchange ideas related to the team homework on the measurement of environmental demand and on the team projects.

Discussion boards:

1. Course Updates (Instructor Only) – Open after the residency
2. General Discussion – Open on September 8
3. Measurement Assignment – Open on September 8
4. Team Projects – Open on September 8