Course Syllabus

Environmental Economics
Tuesday-Thursday, 1:30-2:45am
WEB 115

Professor: Michael Roberts
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Office Hours: Wednesday 9:00-11:00 am, and by appointment
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Course Objectives

Environmental economics may sound like an oxymoron. Most associate economics with business activities and interests that are largely unconcerned with the environment. Some may even feel economics is the source of environmental problems. But economics concerns much more than just business activity. At its core, economics is the study of allocation of scarce goods, including natural environmental resources. Environment connects to economics in that (1) people value environmental resources in their own right and (2) environmental resources are essential inputs into producing almost all other goods.

As economists see it, the essence of environmental problems is that environmental goods are typically not priced like other goods, often because nobody owns or controls them. And if some goods are not priced according to peoples’ willingness to pay, we can have vast inefficiency, which often takes the form of too much pollution. This basic insight, plus economists modeling and empirical skills, allows economists to be useful in helping to address environmental problems in at least four ways: (1) by characterizing the essence of environmental problems and when policy intervention may be needed; (2) point toward efficient solutions to the problem; (3) help quantity tradeoffs between environmental goods and other kinds of goods (ie., quantify values of environmental goods); (4) evaluate tradeoffs of specific policies. The intent is to equip you with the knowledge and tools to do these four things.

Lecture Content and Style

About two thirds of class time will be traditional lecture format. Most of the material will survey prominent papers from the literature, past and present. Some of it will be technical: I assume students have had standard first-year PhD training in economics. I’m probably going to be moving fast, and you are strongly encouraged to read assigned articles ahead of time. Despite the pace, feel free to ask questions without hesitation. If it’s not a good time to provide an answer, I’ll let you know. About one third of class time will be dedicated to student presentation and class discussion. For more on student presentations and discussion, see problem sets and paper reviews below.

Reading

We’ll mostly focus on journal articles that you can find on the course website; however, I strongly suggest you buy the textbook by Kolstad and obtain a copy of Keohane and Olmstead. These books are directed at advanced undergraduates and possibly masters students, but they do a nice job of getting the essential ideas across in a clear way, and as a practicing environmental economist you’ll want them on your bookshelf. If you’re finding the journal articles dense, you might give yourself an occasional break to breeze through a few chapters of these books. But mastering the material contained in them should really be a pre-requisite for this class. Note that Kolstad doesn’t really have much in the way of resource economics.

Problem Sets

I believe that you learn material best by practicing it. You learn more deeply when you have
explain it to others, in writing and through presentation. I will typically assign problem sets on Thursday and they will be due the following Tuesday. You can work in groups if you wish, but everybody should make sure they know the solution and write up their own answer. Nicely typed electronic answers are better. Written in LaTeX is best. It’s good practice to develop beautiful and clear documents, one way or another.

Since you will eventually go on the job market and must present your work and answer questions, I will pick one of you to spend 10 to 15 minutes presenting his/her solution to the problem set on the Tuesday it is due. I will randomly select and notify the person to present the day before (on Monday). Since you all did the problem set, it should be easy to prepare the presentation if I tell you on Monday (see this more as a joint discussion than a test). The random draw is with replacement, so you can be called upon again. Problem set grades will be determined by your presentation and participation in discussion of other people’s presentations.

**Paper Reviews**

Another important job of a scholar is to review others’ work. Critically evaluating others’ work has a way of forcing you to evaluate your own work more critically. It also helps you to decide what features make a research paper compelling. Each week I will assign a paper to be critically reviewed. It will be a paper from the assigned reading, but not one that I cover in lectures. You need not write a review every week; you need only turn in six of them throughout the semester. Reviews are due in class each Thursday. You decide which weeks to submit reviews, but you must let me know by class time Tuesday if you plan to submit a review for the current week. If you submit up to eight reviews, only your best six will count. I will not read more than eight reviews from a student. You need not write a review every week; you need only turn in six of them throughout the semester. Reviews are due in class each Thursday. You decide which weeks to submit reviews, but you must let me know by class time Tuesday if you plan to submit a review for the current week. If you submit up to eight reviews, only your best six will count. I will not read more than eight reviews from a student. Whether you turn in a review or not, you are required to read that week’s assigned paper. Every other week or so (it will be random), I will carve out about 30 minutes of class time and randomly select a student to present their 15-20 minute review and lead a 10-15 minute class discussion; I will let you know if you have to present the day before (Wednesday). You will be graded on the quality of your review, the quality of your presentation, and participation in classroom discussions led by others.

**Class Project**

By the end of the term every student must hand in a class project that either outlines a theoretical contribution to resource/environmental problems or presents some novel empirical exercise. I don’t expect a full paper, but want you to get started on a research idea. In the past, some great research projects have been kicked off with a description of a problem and a preliminary theoretical solution / identification of a data set with preliminary regressions. Come talk to me during the semester about your project ideas.

**Grades**

Your final grade will be the average of the problem sets (30%), your six reviews of assigned papers (30%), and the class project (40%). You might think of your class project as the final. It is due by the end of the final exam period for this class: December 19, 2pm. I will not accept late submissions, as you have all semester to work on it and I have limited time to grade them. You can work together on problem sets, but the class project has to be your own work.

**Honor Code**

This is a graduate class, so I mention this once in the introduction and then leave you alone. I do take the honor code and plagiarism very seriously. In case I detect cheating, I always go for the maximum possible penalty. The detection probability of detection is small, so the fine has to be high (there are papers on optimal costly enforcement).