Economics 266 - Economics of Natural Resources (Fall 2014)

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Office: Economics 227
Office Hours: Tuesdays 2:30-4:30pm and by appointment

Class: Thursday 1:30-4:20pm, Sequoyah Hall 244

This course is an introduction to the principal topics and methods in natural resource and environmental economics. Within this broad outline we'll give particular attention to environmental regulation of industry, energy, and the economics of climate change. Two guest lectures on natural resource economics (dynamics and optimal control) will round out the set of topics. You may choose to focus on any aspect of resource or environmental economics in your written assignments, but I encourage you to talk with me outside class particularly if working on topics we cover only briefly.

Reading List

Required readings will be assigned each week and a careful reading of them will help everyone gain much more from the discussion in class. I'm happy to direct you to additional papers on particular topics that interest you; feel free to come by my office hours or email me.

Assignments and Grades

i) Numerical policy simulation (due 11/6 – but best to start early)
Develop a simulation of a simple environmental policy in a setting with pre-existing distortionary taxes. The first part of the assignment will be mainly on paper (working with a typical set of functions used to represent utility and production) and the second part using Matlab or similar.

ii) Mock referee report (due 11/13)
A concise two-page referee report of a new working paper or journal article (papers will be assigned in class). It should include a brief summary of the methods and findings followed by a longer section (i.e. more than a page) critiquing the paper. Your critique can include potential problems with the method or assumptions that may be violated, suggestions for improvements in the presentation, and plausible extensions and refinements.

iii) Research proposal and mini-presentation (written version due 12/15; presentations TBA)
A proposal for a project that would contribute to the environmental economics literature. The written version will be the main graded component and should be 5-7 pages, excluding references, tables, etc. We will also have a series of short in-class presentations to gather comments and feedback.

iv) Class participation and reading report / presentation
Each week I'll assign one or two students a very short reading-group style presentation to concisely summarize one of the required papers (see reading list) and discuss key assumptions and possible extensions. Together with your overall contribution to class each week this will also factor in to your grade (though with relatively low weight).

Outline

10/9 Externalities, Pigouvian taxes, tradable permits, prices vs. quantities

10/16 Leakage/incomplete regulation, and policy

10/23 Optimal taxation and the second best (and detail on the assignment due 11/6)

10/30 Climate change, overlapping regulation

11/6 Technological change, energy efficiency
(Simulation assignment due)

11/13 Transportation
(Mock referee report due)

11/20 Resource economics: nonlinear dynamics (Junjie Zhang)

11/27 *Thanksgiving holiday*

12/4 Resource economics: optimal control theory (Junjie Zhang)

12/11 Development and environment, sustainability, non-market valuation

Week 10 – Additional class time for presentations, date(s) to be determined

Research proposal due 12/15