

ARE 262. First Half. Peter Berck

I assume an economic knowledge equivalent to Econ 201A/B. Students with a strong technical background other than economics will largely understand what is going on, but will need to do additional study and ask questions about those things that I assume were previously covered.

This part of the course will cover a number of items in environmental economics. The requirements of this half of the course are (1) to complete the problems below (2) present one article to the class (3) participate in class discussion and (4) to take an in class exam at the end of my section.

There will be an in class final on March 13.

There are two books you should own:

Nick Hanley, Jay Shogren and Ben White. *Environmental Economics in Theory and Practice*. 2nd edition. Palgrave MacMillan. 2007.

Environmental Law and Policy. James Salzman and Barton Thompson.

Readings

The readings can be found at:

http://are.berkeley.edu/~peter/new%20261/syllabus_2008.htm

Calendar

Class is scheduled for T-Th from 2-330 in 201 Giannini. Section is scheduled W 5-7P, 201 GIANNINI.

Section will only meet when announced in advance and will be used to fill in for classes that Felipe must miss. In particular there **will** be class on Wed 4/2, 4/16, and 4/30.

My classes will be January 22,24,29,31. Feb. 7, 12,14,19,21,26, 28. March 4,6, 11, 13.

Notice that we do NOT have class 2/5.

Felipe will begin on 4/1, so we do not have class 3/18 and 3/20

Problems

Open Access and Optimal Fisheries

In discrete or continuous time prove that optimal path is a most rapid approach path. The simplest fishery is $\max_h \int p h z e^{-rz} dz$ s.t. $dx/dt = f(x) - h$. You should also try working out the optimal policy for the schaeffer example we used for open access.

Forestry

For a one stand, one starting age class forest, write out the linear program for maximizing present value. Now find it's dual. Use the dual to derive the optimal control. You will need to make some assumptions, like a finite time period and a bequest value.

Classical Environmental Economics

So how should one control a non-point source emitter? A short essay is wanted here—two pages double spaced typed maximum. To be concrete, consider run-off from a corn-soybean operation or auto emissions. Taxes? Quotas? On inputs? Outputs? Here we assume away all the problems of observability except that emissions are too expensive to measure. Save mechanisms for another lecture. Answers that can't be implemented don't count.

Double Dividend

Find my sign error if it is still there in the Diamond Mirrlees lecture. Now, what does Larry Goulder mean by pre-existing distortions? Read his articles and cite chapter and verse, if you can.

Prices v. Quantities

Given that we study mechanism design and revere it so much, why don't we use these sophisticated tools to solve the emissions problem? Here you will need to understand at least one mechanism based solution. Segerson's adaptation of Holstrom is as good as any, but you can choose.

The Billion Dollar Question

If there are so many neat ways to avoid pollution that save money, why aren't we doing them. Why don't people buy energy efficient everything? Ken Train's review gives a nice idea of what the consumers are willing to pay for various improvements. The State of Ca in its automobile regulations finds that consumers would save a great deal of money if cars had 6 speed transmissions and so on. So why do we have to regulate to make it happen?