

Environmental and Resource Economics (8210)

Syllabus – 2017

Lecturer: Dr. David Katz

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Office Hours: Mondays: 16:00-17:00 or by appointment in Rabin Bldg. 8016

Course Session Hours:

1. **02.01.17** (17:00-20:00)
2. **09.01.17** (17:00-20:00)
3. **16.01.17** (17:00-20:00)
4. **23.01.17** (17:00-20:00)
5. **No class on 30.01.17**
6. **06.02.17 double session 14:00-17:00 and 17:00-20:00**
7. **13.02.17** (17:00-20:00)
8. **20.02.17** (17:00-20:00)

Exam: 27.02.17 17:00-20:00

Location: Room 205, Jacobs Building

Objectives: This course will expose students to economic theory of environmental and natural resource management. It will cover a brief introduction of basic welfare economics and applied micro-economic analysis to environmental issues. The beginning of the course will focus on the role of markets in ensuring resource efficiency. The course will then spend much time covering sources of market failure such as externalities and public goods problems and will present and evaluate various economic approaches to addressing such market failures. The course will then address techniques for non-market valuation and for benefit-cost analysis. It will also develop simple models for optimal renewable and non-renewable resource extraction and allocation. Finally, the course will address a limited number of macro-economic issues such as green national accounting, limits to growth, and international trade and the environment. Throughout, the course will emphasize understanding how incentives shape human behavior, and how altering incentives can affect environmental outcomes.

Course Format: Lectures will cover theory and applications.

Course Requirements and Grading: The course requires

- **active participation in class** lectures and discussions,
- submission of **4 homework assignments** (each of which comprises 10% of the final grade), and
- successful completion of an **exam** (which is 60% of the final grade).

Course materials:

The course will use the book ***Markets and the Environment: An Introduction to Environmental and Resource Economics*** by Nathaniel Keohane and Sheila Olmstead. Island Press, Washington, D.C. 2007. (I will refer to this book as **M&E** in this syllabus).

There are many good introductory text books on this topic. The primary advantage of this one is that it is relatively cheap, up to date, and concisely written.

In addition, for each topic, additional readings are assigned. These readings will be posted on the course website and may change during the course.

The course is divided into topics. Some topics will be covered in one week, while others will take two weeks. I will inform you of the appropriate readings as the course progresses.

TOPICS & READINGS

1. Environment and economics – Understanding the connections

- M&E, Chapter 1

2. Economic markets – the basics

- M&E, Chapters 2 and 4
- Balmford, A., “Economic Reasons for Conserving Wild Nature”, Science, 297, August, 2002
- NOAA. 1995. “Economic Valuation of Natural Resources: A Handbook for Coastal Resources Policymakers”, Chapters 2 and 4.
- Owen. 2010. “The efficiency dilemma.” New Yorker. Vol. 86 Issue 41, p78-85

3. Environmental externalities and market failure

- M&E, Chapter 5 - externalities
- *Stern Review on the Economics of Climate Change (Exec. Summary)*, UK Treasury, 2007.
- NOAA. 1995. “Economic Valuation of Natural Resources: A Handbook for Coastal Resources Policymakers”, Chapters 5 and 6.

4. Policy mechanisms for addressing environmental externalities

- M&E, Chapters 8,9, 10
- "Last gasp for the forest", The Economist 24 September, 2009.

5. Non-market valuation techniques

- NOAA. 1995. “Economic Valuation of Natural Resources: A Handbook for Coastal Resources Policymakers”, Chapters 5 and 6.
- Braden, J., “How Valuable is Valuation? Issue Overview”

6. Public goods and common pool resources

- M&E, Chapter 5 – public goods and tragedy of the commons
- Graves, P. (2003) Valuing Public Goods. Challenge (46) 5: 100–112.
- Economist, “Economy of scales” & “A Rising Tide” Sep 18th 2008
- Peterson, et al, (2003). “Conserving the Ogallala Aquifer: Efficiency, Equity, and Moral Motives”, Choices, First Quarter: 15-18.

7. Discounting the future and benefit cost analysis

- M&E, Chapter 3 – benefit cost analysis
- Goulder and Stavins, “An Eye on the Future”, Nature, 419, 2002.
- Arrow, K., et al, “Is there a role for Benefit-Cost Analysis in Environmental, Health, and Safety Regulation,” Science, 272, 1996.
- Randall, A. “Why benefits and costs matter”, Choices, 1999.

8. Sustainability and economic growth

- M&E, Chapter 3 – benefit cost analysis
- Daly, H., “Economics in a Full World”, Scientific American, September, 2005
- Hecht, J.E. “Environmental Accounting: Where We Are Now, Where We Are Heading” Resources, 135, Spring, 1999.
- Arrow, K. et al, “Economic Growth, Carrying Capacity, and the Environment”, Science 268, 1995.

9. International trade and the environment

If we have time, we will also address issues relating to international trade:

- Economist “Why greens should love trade”, The Economist, Oct. 9, 1999.
- Meadows, D., “Why Greens Don’t Love the WTO”, The Global Citizen, Nov. 25, 1999.
- Najam, A. et al, (2007) “Trade and the Environment: A Resource Book”, ICTSD. Chapters 1 & 2 (pp. 3-25).