

## Environmental and Natural Resource Economics - ECON 322

**Instructor:** Tatyana Kuzmenko

**Semester:** Spring 2017

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**Office:** Tyler 425

**Office Hours:** MWF 11:30am-1pm, Tues 2-4pm, or by appointment

**Class Meetings:**

- Section 1: MW at 2:00 pm in Morton 38
- Section 2: MW at 3:30 pm in Morton 38

### Course Description

The application of efficiency and equity criteria to environmental issues. Topics include market failure and regulatory approaches to address environmental problems, natural resource management, and sustainability. This is a COLL 200 course; it is anchored in the CSI domain, and also considers aspects of the NQR domain.

### Textbook and Other Readings

- *Markets and the Environment* by Nathaniel O. Keohane and Sheila M. Olmstead 1<sup>st</sup> edition (ISBN: 9781597260473) or 2<sup>nd</sup> edition (ISBN:9781610916073). A copy was placed on reserve at Swem Library.
- Additional required articles will be made available on Blackboard or at Swem.

### Grading

Grades will be based on homework assignments, 2 midterms and a cumulative final exam. Grade percentages are as follows:

- Homework assignments: 20%
- Midterms: 44% total (22% each)
- Final Exam: 36%
- **Homework assignments** will be available on Blackboard (under "Assignments"). There will be 10 problem sets; please see the attached course calendar for homework due dates. Problem sets will be graded mostly for completion and suggested answers will be provided. Late homework will not be accepted; however, one lowest homework grade will be dropped.
- **Midterm exams** will be given on the following dates:
  - Midterm 1: Feb 22 (Wednesday), during class time
  - Midterm 2: April 5 (Wednesday), during class time

*Midterm grade replacement:* Your lowest midterm exam score will be replaced with your final exam score if the final is better than the midterm. This applies to one midterm exam only.

*Midterm make-up policy:* If you know that you will not be able to attend an exam come see me ahead of time with a valid, documented excuse and we will attempt to arrange for you to take the exam before it is given. A midterm exam can be taken after the exam date ONLY if you miss it due to an emergency AND can provide a letter from the Dean of Students office. In all other situations, your final exam grade will be used in lieu of the missed midterm grade.
- **Final Exam** will take place:
  - For the MW 2:00 pm section: May 4<sup>th</sup> (Thursday) at 2:00 pm
  - For the MW 3:30 pm section: May 1<sup>st</sup> (Monday) at 9:00 am
- Grading scale:

93 or more = A	90 – 92.99 = A-
87 – 89.99 = B+	83 – 86.99 = B
	80 – 82.99 = B-

77 – 79.99 = C+	73 – 76.99 = C	70 – 72.99 = C-
67 – 69.99 = D+	63 – 66.99 = D	60 – 62.99 = D-
Below 60 = F		

## Expectations and Additional Policies

- Please mute all cell phones and turn off any other electronic devices when entering class unless they are used for note-taking or legitimate class-related purposes.
- All files, announcements, assignments, and grades will be posted on Blackboard. Students should check this site regularly.
- You are welcome to study together. However, homework assignments and all exam work should be completed without the aid of other students. The use of unauthorized aid on a graded assignment or exam will be considered a violation of the Honor Code.
- There will be no individual extra credit opportunities. If I offer any extra credit assignments, they will be available to all students in the course.
- Class attendance and participation can greatly improve your learning experience and your ability to succeed in this course. Furthermore, in cases of borderline grades, attendance and participation will be taken into account to boost (but never lower) your grade.
- Grading errors and re-grading: If you believe that your score on an exam or homework was incorrect or that you should receive more credit for your work, you have to submit a written request for re-grading within one week from the day the exam or assignment was returned.
- It is the policy of The College of William & Mary to accommodate students with disabilities and qualifying diagnosed conditions in accordance with federal and state laws. Any student who feels s/he may need an accommodation based on the impact of a learning, psychiatric, physical or chronic health diagnosis should be referred to Student Accessibility Services staff at 757-221-2509 or at [sas@wm.edu](mailto:sas@wm.edu). SAS staff will work with you to determine if accommodations are warranted, and if so, to help you obtain an official letter of accommodation. For more information please see [www.wm.edu/sas](http://www.wm.edu/sas).

## Course Outline and Readings

- *TEXT* refers to *Markets and the Environment* by Keohane and Olmstead. Ed.1 stands for the first edition, Ed.2 for the second.
  - *Note: This is a tentative schedule, and some of the readings might change. As we move throughout the semester please visit Blackboard often for updates.*
1. Introduction and Microeconomics Review
  2. The Efficiency of Markets; Market Failures: Externalities and Public Goods
    - *TEXT*: Chapters 4 and 5
    - Choy and McGhee, “Groundwater: Ignore It, and It Might Go Away”
  3. Economic Efficiency and Environmental Protection
    - *TEXT*: Chapter 2, pages 11-27 in Ed.1, or pages 11-30 in Ed.2.
  4. Principles of Market-based Environmental Policy
    - *TEXT*: Chapter 8, pages 125-137 in Ed.1, or pages 139-153 in Ed.2.
  5. The Benefits and Costs of Environmental protection
    - *TEXT*: Chapter 2, pages 28-29 in Ed. 1, or pages 31-33 in Ed. 2; Chapter 3
    - Goulder and Stavins, “An Eye on the Future.” *Nature*, 2002.
    - Pasurka, “Perspectives on Pollution Abatement and Competitiveness: Theory, Data, and Analyses,” *Review of Environmental Economics and Policy*, 2008.
    - Krutilla, “Conservation Reconsidered”, *American Economic Review*, 1967.
    - Hanemann, “Valuing the Environment through Contingent Valuation,” *Journal of Economic Perspectives*, 1994.

- Portney, "The Contingent Valuation Debate: Why Economists Should Care," *Journal of Economic Perspectives*, 1994.
- Viscusi, "The Devaluation of Life", *Regulation & Governance*, 2009.
- 6. Managing Stocks: Efficient Extraction of Natural Resources
  - TEXT: Chapter 6
  - Livernois, "On the Empirical Significance of the Hotelling Rule." *Review of Environmental Economics and Policy*, 2009
- 7. Renewable Resource Management: Fisheries
  - TEXT: Chapter 7 and select pages from Ch. 8 and 10
- 8. Sustainability and Economic Growth
  - TEXT: Chapter 11
  - Solow, "Sustainability: An Economist's Perspective." *National Geographic Research & Exploration*, 1992.
  - Solow, "An almost practical step toward sustainability." *Resources Policy*, 1993.
- 9. Market-based Instruments in Environmental Policy
  - TEXT: Chapters 8 and 9
  - Goulder and Parry, "Instrument Choice in Environmental Policy." *Review of Environmental Economics and Policy*, 2008.
- 10. Market Based Instruments in Practice
  - TEXT: Chapter 10
  - Schmalensee and Stavins, "The SO<sub>2</sub> Allowance Trading System: The Ironic History of a Grand Policy Experiment." *Journal of Economic Perspectives*, 2013.
- 11. Economics and Environmental Policy Making
  - TEXT: Chapter 12
  - Keohane, Revesz, and Stavins "The Choice of Regulatory Instruments in Environmental Policy", *Harvard Environmental Law Review*, 1998.
  - Freeman, "Environmental Policy Since Earth Day I: What Have We Gained?", *Journal of Economic Perspectives*, 2002.
  - Graham, "The Evolving Regulatory Role of the U.S. Office of Management and Budget." *Review of Environmental Economics and Policy*, 2008
- 12. Climate change
  - The National Climate Assessment (May 2014), [nca2014.globalchange.gov](http://nca2014.globalchange.gov)
  - Climate change indicators in the United States, 2016. EPA 430-R-16-004. [www.epa.gov/climate-indicators](http://www.epa.gov/climate-indicators).
  - Metcalf, "Market-based Policy Options to Control U.S. Greenhouse Gas Emissions." *Journal of Economic Perspectives*, 2009.
  - Olmstead, Sheila M. and Robert N. Stavins. Three Key Elements of Post-2012 International Climate Policy Architecture. *Review of Environmental Economics and Policy*, 2012.
  - Sandel, "It's Immoral to Buy the Right to Pollute," *New York Times*, 1997; and replies by Shavell, Stavins, Gaines, Leifman, and Maskin.
  - Additional readings TBA (see course Blackboard).

## Econ 322 Course Calendar

	Monday	Tuesday	Wednesday	Thursday	Friday
Jan	16	17	18 First class	19	20
	23 PS 1 due	24	25	26	27 <b>End of add/drop</b>
	30 PS 2 due	31	1	2	3
Feb	6 PS 3 due	7	8	9	10
	13 PS 4 due	14	15	16	17
	20 PS 5 due	21	22 Midterm 1	23	24
	27	28	1	2	3
Mar	6 Spring	7 Break	8 Spring	9 Break	10 Spring
	13 PS 6 due	14	15	16	17 <b>Last day to withdraw</b>
	20 PS 7 due	21	22	23	24
	27 PS 8 due	28	29	30	31
Apr	3 PS 9 due	4	5 Midterm 2	6	7
	10	11	12	13	14
	17 PS 10 due	18	19	20	21
	24 PS 11 due	25	26 Last class	27	28
May	1 <b>at 9 am</b> Final exam for 3:30 pm section	2	3	4 <b>at 2 pm</b> Final exam for 2:00 pm section	5