

SYLLABUS: ECON 342: ENVIRONMENTAL ECONOMICS

UNM, Fall 2017

INSTRUCTOR: SAMRAT B. KUNWAR

Email: sbkunwar@unm.edu

Class Hours: MWF 11:00 am – 11:50 am

Office: ECON 1028

Location: MITCH 205

Office Hours: T/TR- 11:00 am – 11:50 am

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COURSE OVERVIEW

This course is designed to introduce students to environmental and natural resource management. We will investigate basic causes and consequences of environmental problems from a theoretical and conceptual framework. The class is divided into two parts: In the first half, we will investigate economic concepts and models to analyze natural resource and environmental problems. We will explore topics such as resource scarcity, externalities, property rights, opportunity cost, sustainability, non-market valuation and social cost-benefit analysis. The second part of the course will be devoted to optimal management of exhaustible and renewable resources, including energy, water resources, land and ecosystem services.

GOALS AND OBJECTIVES

Upon completion of this course, students should be able to apply economic principles to problems involving public and private natural resources and the environment. Students will also be able to explain environmental problems using graphical analysis and written and verbal communication.

REQUIRED TEXTBOOK

1. "Environmental and Natural Resource Economics" (10th edition) by Tom Tietenberg and Lynne Lewis, Routledge, 2014

ISBN-10: 0133479692 | ISBN -13: 978-0133479690

The lectures and the course materials will be based off this book, and it is recommended that you obtain a copy of it. While the 10th edition is the latest version, the 9th edition of the book is also perfectly fine to use.

This textbook is comprehensive and only selected chapters will be used for the class.

COURSE PREREQUISITE:

Students are expected to have completed Econ 105 and Econ 106 before taking this class.

CLASS ANNOUNCEMENTS:

E-mail or the class website will be used to make class announcements. The lecture notes and the solutions to the in-class assignments will be posted to the class website after completion.

COURSE FORMAT

The class meets three times per week for 50 minutes. The course schedule in page 4-5 outlines the topics that will be covered each week. The class format will be a combination of lectures, in-class assignments and a group presentation. (i) The lecture notes will be uploaded to the class website at the end of each class. (ii) Similarly, after the completion of each chapter, the following class will be devoted to in-class assignment that students will need to complete by the end of that class. Students are required to work in a group of two to complete the in-class assignment. I will create a group consisting of two

randomly selected students, and the same group should work together on the in-class assignments until the end of the semester. (iii) The final two weeks of the semester will be used for group presentations. For the group presentation, I will make a random group of 4 students and the group should prepare a presentation on an assigned article.

Student participation is strongly encouraged in the class.

COURSE REQUIREMENTS

1. **Two mid-term exams** and a final non-comprehensive exam. The two mid-term exams will be 50 minutes long and take place in class on the dates listed. The exams will cover topics presented in the lectures. There will be **no make-up** exams given in the course unless a reasonable excuse is provided from the Dean of Students Office.
2. **In-class assignments** at the end of each chapter to test student's analytical skills in environmental and resource economics. The in-class assignments will be held during the class and students are expected to complete it by the end of that class period.
3. **Group Presentation:** Students will be divided into a group of 4-5 and asked to prepare a formal presentation from one of the articles listed in page 3. The goal of the presentation is to expose the class to the real-world application of the topics discussed in the class. Presentations should be between 30 to 35 mins and should include prepared slides (i.e., PowerPoint). Presentations should also include a discussion of the method or strategy the author uses to justify their argument, as well as any key figures or diagrams that illustrate the author's point. Following each presentation, the rest of the class will be given the opportunity to ask questions and/or express their opinions about the paper. A copy of the presentation slides should be e-mailed to me by 7:00 pm the night before the scheduled presentation. Each group member must speak during the presentation.

The course grade will be based on the following elements:

Task	Percentage of Final Grade (%)
Exams	
1. Exam I	15%
2. Exam II	15%
3. Exam III	15%
In-Class Assignments	20%
Group Presentation	20%
Attendance	10%
Participation	5%

GRADING SCALE:

Cumulative Points	Grade
93-100	A
90-92.9	A-
87-89.9	B+
83-86.9	B
80-82.9	B-

Cumulative Points	Grade
77-79.9	C+
73-76.9	C
70-72.9	C-
67-69.9	D+
63-66.9	D
60-62.9	D-
0-59.9	F

GROUP PRESENTATION ARTICLES:

The group presentation should be based on these papers:

Anthoff, D., & Hahn, R. (2010). Government failure and market failure: on the inefficiency of environmental and energy policy. *Oxford Review of Economic Policy*, 26(2), 197-224.

Barbier, E. B. (1997). The economic determinants of land degradation in developing countries. *Philosophical Transactions of the Royal Society of London B: Biological Sciences*, 352(1356), 891-899.

Colby, B. G., & d'Estree, T. P. (2000). Economic evaluation of mechanisms to resolve water conflicts. *International Journal of Water Resources Development*, 16(2), 239-251.

Gillingham, K., Newell, R. G., & Palmer, K. (2009). Energy efficiency economics and policy. *Annu. Rev. Resour. Econ.*, 1(1), 597-620.

Hanemann, W. M. (1994). Valuing the environment through contingent valuation. *The journal of economic perspectives*, 8(4), 19-43.

Loomis, J. B. (2011). Incorporating distributional issues into benefit cost analysis: why, how, and two empirical examples using non-market valuation. *Journal of Benefit-Cost Analysis*, 2(1), 1-24.

Pattanayak, S. K., Wunder, S., & Ferraro, P. J. (2010). Show me the money: Do payments supply environmental services in developing countries?. *Review of Environmental Economics and Policy*, 4(2), 254-274.

Ruckelshaus, M., McKenzie, E., Tallis, H., Guerry, A., Daily, G., Kareiva, P., & Bernhardt, J. (2015). Notes from the field: lessons learned from using ecosystem service approaches to inform real-world decisions. *Ecological Economics*, 115, 11-21.

EXPECTATIONS FROM STUDENT

Attend class: Attendance is not optional. Keep up on all readings. Bring reading materials to class. Turn in all assignments. Participate in discussions. Be familiar with email and check it regularly. Check the class web site regularly for assignments and updates. Be thoughtful and civil to classmates and the instructor. Please do not eat in class. Turn off phones. Use of electronic devices (including computers) during class must be approved by the instructor.

GENERAL POLICIES

ACADEMIC MISCONDUCT

Cheating in any form compromises your grade and lowers the quality of your diploma. Classmates who cheat may actually lower your grade by inflating grades, etc. Please make a point to read the Student Handbook regulations on academic dishonesty. To clarify, using someone's work without giving that person proper credit (i.e. properly citing them) or passing other people's works off as your own is considered plagiarism regardless of whether you got the material from a book, the Web or your best friend. The current University Regulations can be found at: <http://pathfinder.unm.edu/campus-policies/student-code-of-conduct.html#studentcode>

EXAM POLICY

You are expected to be on time for each scheduled exam. Be aware that no one will be allowed to take the examination after one of the students in the class has completed his or her exam and left the room. No one is allowed to leave the room for any reason during the examination unless she or he becomes suddenly too ill to complete the examination (In such extreme cases, students will have to complete a different, make-up essay exam).

EMAIL POLICY

E-mail is not a substitute for meeting with me during office hours. E-mail should be used to schedule an appointment outside of office hours or for short questions clarifying class assignments or specific items from the lecture. In-depth questions about course readings or an entire day's lecture, etc. are not appropriate for e-mail.

ACCESSIBILITY POLICY:

For any qualified student requiring arrangements for exam accommodation, a note taker, etc. from Accessibility Services at UNM, please notify the instructor as soon as possible.

Disclaimer: I reserve the right to make any changes to accommodate class progress.

TENTATIVE CLASS SCHEDULE

WK	DATE	TOPIC	ASSIGNMENT	Exam
Part 1: Economic Concepts, Models and Tools				
1	M 8/21	Chapter 1- <i>Visions of the Future</i>		
	W 8/23	"		
	F 8/25		<i>In-class exercise - Ch 1</i>	
2	M 8/28	Chapter 2 - <i>The Economic Approach: Property Rights, Externalities, and Environmental Problems</i>		
	W 8/30	"		
	F 9/1	"		
3	M 9/4	*Break: Labor Day*		
	W 9/6		<i>In-class exercise – Ch 2</i>	
4	F 9/8	Chapter 3 – <i>Evaluating the Trade-Offs: Benefit-Cost Analysis and Other Decision-Making Metrics</i>		
	M 9/11	"		
	W 9/13		<i>In-class exercise – Ch 3</i>	
	F 9/15	Exam 1 Review		

	M 9/18	Exam 1		Exam 1: (Chapter 1-3)
5	W 9/20	Chapter 4 - <i>Valuing the Environment: Methods</i>		
	F 9/22	"		
	M 9/25		<i>In-class exercise – Ch 4</i>	
6	W 9/27	Chapter 5 - <i>Dynamic Efficiency and Sustainable Development</i>		
	F 9/29	"		
	M 10/2		<i>In-class exercise – Ch 5</i>	
7	W 10/4	Chapter 6 - <i>Depletable Resource Allocation: The Role of Longer Time Horizons, Substitutes, and Extraction Cost</i>		
	F 10/6	"		
	M 10/9		<i>In-class exercise – Ch 6</i>	
8	W 10/11	Exam 2 Review		
	F 10/13	*Break: Fall Break*		
Part 2: Depletable and Renewable Resource Economics				
9	M 10/16	Exam 2		Exam 2: (Chapter 4-6)
	W 10/18	Chapter 7 – <i>Energy: The Transition from Depletable to Renewable Resources</i>		
	F 10/20	"		
	M 10/23		<i>In-class exercise – Ch 7</i>	
10	W 10/25	Chapter 9 – <i>Water: A Confluence of Renewable and Depletable Resources</i>		
	F 10/27	"		
	M 10/30	"		
11	W 11/01		<i>In-class exercise – Ch 9</i>	
	F 11/03	Chapter 10 - <i>A Locationally Fixed, Multipurpose Resource: Land</i>		
	M 11/06			
12	W 11/08		<i>In-class exercise – Ch 10</i>	
	F 11/10	Chapter 13 – <i>Ecosystem Goods and Services: Nature’s Threatened Bounty</i>		
	M 11/13	"		
13	W 11/15		<i>In-class exercise – Ch 16</i>	
	F 11/17	NO CLASS		
	M 11/20		Group Presentation Discussion	
14	W 11/22	GROUP 1		
	F 11/24	*Break: Thanksgiving*		
15	M 11/27	GROUP 2		
	W 11/29	GROUP 3		
	F 12/01	GROUP 4		
16	M 12/04	GROUP 5		
	W 12/06	GROUP 6		
	F 12/08	Exam Review		
17	M 12/11	Finals Week		
	W 12/13			

	F 12/15	
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