Spring 2016

EEP 460 Natural Resource Economics

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Office Hours: M & W 10:00-11:00 AM, and by appointment
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Class Schedule: M & W 12:40 - 2:00 PM, Room C301 Snyder Hall
Recitation: F. 10:00-11:00 AM (Room 49 Morrill Hall of Agriculture)
Text: Field, B.C, *Natural Resource Economics: An Introduction*, 2nd Ed., Waveland Press, 2008

Prerequisite: EC 201; Recommended: EEP 255 Ecological Economics

Course Objectives

This course is designed to develop and enhance students' understanding of:

- the concepts of economic efficiency and cost-effectiveness in the allocation of natural resources;
- whether markets tend to efficiently allocate resources, and why;
- how and why ecosystem services have value, and how to measure this;
- the design and economic performance of policy instruments to correct market failure;
- how economic and ecological systems are inter-connected

The course is based on lecture notes and book readings. Thus, in order to have a thorough understanding of the material, it is important to attend lectures and do the readings regularly. I will use power point slides and the blackboard for notes during lectures, and we will also use computer software (Excel) for some numerical simulations.

Grading

Course grades will be determined as follows:

Activity	Percent of Grade
Exam I	26.6%
Exam II	26.6%
Exam III (non-cumulative)	26.6%
Problem Sets	20 %

Twelve problem sets will be assigned, solving them provides the best way to learn the concepts and to prepare for the exams. Each problem set will be uploaded on the D2L site on the tentative date provided in the schedule of topics. Assignments must be handed in prior to the start of class. Late homework will incur in a penalty of 25% of its valuation.

In addition to class hours, you will have the option to attend weekly recitation lectures. They are an extra support tool designed to help with any difficulty found in the problem sets or in any of the concepts covered during a particular week.

Exams will be problem-oriented. If you can do the homework, then you should be in good shape for the exams.

If for any reason you miss one of the midterm exams, its grade would be shifted to the next exam. If you can't take the final at the scheduled time because of illness or some other reason beyond our control, please notify the associate dean of your college immediately, and be prepared to document what caused you to miss the exam.

EEP 460 Course outline and tentative schedule of topics* Spring 2016

Date	Lecture # and Topic	Readings
1/11	1. Course introduction and overview	
1/13	2. WTP, demand and economic surplus	Ch. 3: pp.41-50
1/18	**MLK Day – No Class**	
1/20	3. Costs, supply, and economic rents	Ch. 4 (except present value discussion)
1/25	4. Static efficiency, markets, and externalities	Ch. 5: pp.69-71; Ch. 6: pp.87-95
1/27	5. Valuation of resources and introduction to water resources.	Ch. 9
2/1	6. Making policy decisions efficiently: water markets	Ch. 15; Ch. 8: p.130-131
2/3	7. More on cost-effectiveness: biodiversity	Ch. 19
2/8	8. Biodiversity: payments for environmental services	Ch. 19
2/10	9. Other policy objectives beyond efficiency: self-sufficiency in energy production, and increasing recycling ratios.	Ch.11: pp.202-205; Ch. 10: pp.185-188
2/15	**Finish prior topics/Review**	
2/17	**Exam I**	
2/22	10. Dynamic efficiency, marginal user costs, and scarcity rents (and discounting)	Ch. 5: 71-79
2/24	11. Non-renewable resources: Mining Problems; Introduction to Excel	Ch. 10
2/29	12. Non-renewable Resources: Two period problem	Ch. 10
3/2	13. Extensions of the basic mining problem: investing in new reserves and backstop technologies, sustainability, and rent capture (taxing rents).	Ch. 10
3/7	**SPRING BREAK**	
3/9	**SPRING BREAK**	

3/14	14. Introduction to Renewable Resources: Resource growth and feedbacks	Ch. 13: pp.239-248
3/16	15. Renewable Resources: Numerical Example	
3/21	16. Renewable Resources: Non-market values	
3/23	**Finish prior topics/Review**	
3/28	**Exam II**	
3/30	17. Open Access and feedbacks	Ch. 13: pp.248-249
4/4	18. Open Access vs. Efficiency, and Policy Mechanisms	Ch. 13: pp.249-256; Ch. 7
4/6	19. Simulating policies on Excel.	
4/11	20. Measuring Resource Values and Economic Welfare	Ch. 20
4/13	21. Wildlife and Recreational Use of Resources	Ch. 18
4/18	22. Wildlife and Recreational Use of Resources	Ch. 18
4/20	23. Forestry	Ch. 12
4/25	24. Ecological Economics: Invasive Species and endogenous thresholds.	
4/27	**Finish prior topics/Review**	
5/5 12:45-2:45pm	**Final Exam (non-cumulative)**	

*NOTE: **EXAM** dates are fixed. Readings are **TENTATIVE**, but plan on reading the indicated material unless instructed otherwise in the preceding class.

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Problem set schedule

	Date distributed	Date due
PS # 1	1/13	1/18
PS # 2	1/20	1/25
PS # 3	1/25	2/1
PS # 4	2/1	2/8
PS # 5	2/8	2/10
PS # 6	2/10	2/15
PS # 7	2/24	2/29
PS # 8	2/29	2/29
PS # 9	3/14	3/21
PS # 10	3/30	4/4
PS # 11	4/4	4/11
PS # 12	4/11	4/18