

**M, W, F 11:10-12:00p.m**  
**JSNH C105**

**Instructor:** Ana Espinola, Hulbert 111C, [anaespinola@wsu.edu](mailto:anaespinola@wsu.edu)

**Office hours:** Tuesdays 3:00-4:00pm, or by appointment.

**Class webpage:** <http://lms.wsu.edu/default.asp> and <http://faculty.ses.wsu.edu/Espinola/econ330.htm>

**TA:** John Strandholm ([j.strandholm@wsu.edu](mailto:j.strandholm@wsu.edu)) **Office hours:** Thursdays 9.00-10.00am (Hulbert 207B)

**Prerequisite:** Econ 101 (Introduction to micro-economics)

**Content and Purpose:**

This course applies theoretical and empirical economic tools to a number of environmental issues. The broad concepts discussed include externalities, public goods, property rights, market failure, and social cost-benefit analysis. These concepts are applied to a number of areas including nonrenewable resources, air pollution, water pollution, solid waste management, and hazardous substances. Special emphasis is devoted to analyzing the optimal role for public policy. The major objectives are for students to: (1) learn basic economic principles governing the allocation of various categories of scarce natural/environmental resources among competing uses; and (2) gain experience with basic analytical tools useful for applying these principles to real world allocation problems.

**Texts and Assigned Readings:**

- Tietenberg, T. and L. Lewis. (2012), Environmental & Natural Resource Economics (9th Ed.)<sup>1</sup>, Pearson Education, Inc.
- Perman, R., Ma, Y., McGilvray, J and Common, M (2003). Natural Resource and Environmental Economics. 3rd edition, Chapter 10.
- Other readings will be assigned in class. They are located (as pdf files) in the ‘Assigned Readings’ section of the class webpage. The password required to access this section will be given in class.

**Assignments and Evaluation:**

Two midterms and a final exam will count 15% (each) and 30% respectively in determining the course grade. These exams will contain a combination of multiple choice and essay type questions. The final will cover the whole course, but material not covered on the midterm will receive a heavier weight. The average of the best four of five quiz scores will count 20%. Five homeworks will be assigned during the semester. Late assignments will be marked down 15% for each week-day late down to 70%; no assignments will be accepted after the last week of classes. Midterm and final makeup’s are possible only if reasons beyond the student’s control can be verified. Please note that all items in this syllabus are subject to change at the discretion of the professor.

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<sup>1</sup> An older edition of the book should also be OK, since there have been few changes in the parts of the book that we will use during the semester.

Assignments	Number	Percentage
Midterm	2	15% (each)
Final	1	30%
Quiz	5	20%
Homework	5	20%
Total		100%

**Grading Scale:**

<b>A</b>	<b>95-100</b>	<b>C-</b>	<b>50-54</b>
<b>A-</b>	<b>85-94</b>	<b>D+</b>	<b>45-49</b>
<b>B+</b>	<b>80-84</b>	<b>D</b>	<b>40-44</b>
<b>B</b>	<b>70-79</b>	<b>F</b>	<b>0-39</b>
<b>B-</b>	<b>65-69</b>		
<b>C+</b>	<b>60-64</b>		
<b>C</b>	<b>55-59</b>		

**Tentative Class Calendar and Topics:**

Date	Topic	Homework Assignment	Quiz
August 19 <sup>th</sup>	Introduction		
August 21 <sup>st</sup>	Valuing the environment – [CH2-8 <sup>th</sup> / CH3-9 <sup>th</sup> ]		
August 23 <sup>rd</sup>	Continued [CH3-8 <sup>th</sup> / CH4-9 <sup>th</sup> ]		
August 26 <sup>th</sup>	Property rights/Externalities – [CH4-8 <sup>th</sup> / CH2-9 <sup>th</sup> ]	Homework 1 (due 9/13)	
August 28 <sup>th</sup>	Continued		
August 30 <sup>th</sup>	Continued		#1
September 2 <sup>nd</sup>	<b>Labor day</b>		
September 4 <sup>th</sup>	Dynamic Efficiency – [CH5-8 <sup>th</sup> / CH5-9 <sup>th</sup> ]		
September 6 <sup>th</sup>	Continued		
September 9 <sup>th</sup>	Continued		
September 11 <sup>th</sup>	The Population Problem – [CH6-8 <sup>th</sup> / CH21-9 <sup>th</sup> ]		#2
September 13 <sup>th</sup>	Continued		
September 16 <sup>th</sup>	Continued	Homework 2 (due 09/25)	
September 18 <sup>th</sup>	Resource Allocation – [CH7-8 <sup>th</sup> / CH7-9 <sup>th</sup> ]		
September 21 <sup>st</sup>	Continued		#3
September 23 <sup>rd</sup>	Continued		
September 25 <sup>th</sup>	Continued		
<b>September 27<sup>th</sup></b>	<b>Midterm #1- Part I</b>		
<b>September 30<sup>th</sup></b>	<b>Midterm #1- Part II</b>		
October 2 <sup>nd</sup>	Energy –[CH8-8 <sup>th</sup> / CH7-9 <sup>th</sup> ]		
October 4 <sup>th</sup>	Continued		
October 7 <sup>th</sup>	Recyclable Resources – [CH9-8 <sup>th</sup> / CH8-9 <sup>th</sup> ]		
October 9 <sup>th</sup>	Continued		
October 11 <sup>th</sup>	Water –[CH10-8 <sup>th</sup> / CH9-9 <sup>th</sup> ]		#4
October 14 <sup>th</sup>	Continued		
October 16 <sup>th</sup>	Agriculture – [CH11&12-8 <sup>th</sup> / CH11&12-9 <sup>th</sup> ]		
October 18 <sup>th</sup>	Continued		

October 21 <sup>st</sup>	Continued	Homework 3 (due 10/30)	
October 23 <sup>rd</sup>	Continued		
October 25 <sup>th</sup>	Common-Pool Resources – [CH14-8 <sup>th</sup> / CH13-9 <sup>th</sup> ]		
October 28 <sup>th</sup>	Game Theory – Prisoner’s Dilemma		
October 30 <sup>th</sup>	Continued		
November 1 <sup>st</sup>	Midterm #2	Homework 4 (due 11/22)	
November 4 <sup>th</sup>	Game Theory – Extensive form game		
November 6 <sup>th</sup>	Game Theory – The Tragedy of the Commons		
November 8 <sup>th</sup>	Continue		
November 11 <sup>th</sup>	<b><i>Veteran's Day</i></b>		
November 13 <sup>th</sup>	Continued		
November 15 <sup>th</sup>	Continue		
November 18 <sup>th</sup>	Applications of Game theory in Environmental Problems		
November 20 <sup>th</sup>	Continued	Homework 5 (due 12/6)	
November 22 <sup>nd</sup>	Continued		#5
November 25 <sup>th</sup> -29 <sup>th</sup>	<b><i>Thanksgiving Break</i></b>		
December 2 <sup>nd</sup>	Continued		
December 4 <sup>th</sup>	Continued		
December 6 <sup>th</sup>	Review Class		
<b>Friday, December 13<sup>th</sup></b>	<b>Final 3.10pm at JSNH C105</b>		

**Disability Resource Accommodation:**

Reasonable accommodations are available for students who have a documented disability. Please notify the instructor the first week of class of any accommodations needed for the course. Late notification may cause the requested accommodations to not be available. All accommodations must be approved through the Disability Resource Center (DRC) (Washington Building, Room 217). Please stop by or call 509-335-3417 to make an appointment with a disability specialist <http://www.drc.wsu.edu>.

**Academic Honesty:**

WAC 504-25-015. Academic dishonesty, such as cheating, plagiarism, fabrication, and fraud, is prohibited. See <http://www.conduct.wsu.edu/default.asp?PageID=343> for more information and specific definitions of academic dishonesty.

As an institution of higher education, Washington State University is committed to principles of truth and academic honesty. All members of the University community share the responsibility for maintaining and supporting these principles. When a student enrolls in Washington State University, the student assumes an obligation to pursue academic endeavors in a manner consistent with the standards of academic integrity adopted by the University. To maintain the academic integrity of the community, the University cannot tolerate acts of academic dishonesty including any forms of cheating, plagiarism, or fabrication. Washington State University reserves the right and the power to discipline or to exclude students who engage in academic dishonesty. To that end, the University has established the following rules defining prohibited academic dishonesty and the process followed when such behavior is alleged. These rules

incorporate Washington State University's Academic Integrity Policy, the University-wide document establishing policies and procedures to foster academic integrity. This policy is applicable to undergraduate and graduate students alike, as it pertains to dishonesty in course work and related academic pursuits. In cases of dishonesty in research and original scholarship, the University's Policy and Procedural Guidelines for Misconduct in Research and Scholarship may take precedence over the policies and procedures contained herein.

Academic dishonesty includes cheating, plagiarism, and fabrication in the process of completing academic work. These standards should be interpreted by students as general notice of prohibited conduct. They should be read broadly, and are not designed to define misconduct in exhaustive forms.

### **Campus Safety Plan**

Can be found at <http://safetyplan.wsu.edu> and <http://oem.wsu.edu/emergencies>, contains a comprehensive listing of university policies, statistics and information related to campus safety, emergency management and the health and welfare of the campus community.

**Disclaimer: This syllabus is subject to change to facilitate instructional and/or student needs.**