

ENVIRONMENTAL & RESOURCE ECONOMICS

ECON 364 -- FALL 2016

INSTRUCTOR **PROFESSOR D. LUECK**
CLASS Tuesday & Thursday, 1:00-2:15, 101 Wylie Hall
OFFICE Wylie 202, lueck@indiana.edu
OFFICE HOURS Tuesday and Thursday 11:30-12:30 pm and by
appointment.
Course Webpage: Canvas

PREREQUISITES. ECONOMICS 321 -- INTERMEDIATE MICROECONOMIC THEORY

DESCRIPTION. Economics is used to study the allocation, management, and ownership of the environment and natural resources as air, fisheries, forests, global resources, minerals, natural areas, oil & gas, water, and wildlife. The course is comprised of theoretical models and detailed applications – including economic development, climate change, and wildfire management. Emphasis is placed on the causes and effects of alternative institutions governing the use of the natural environment with a focus on property rights, legal rules, regulations, and administrative agencies.

COURSE OBJECTIVES. This course will expose students to techniques relevant for the analysis of environmental and natural resource issues from an economic perspective. The course will also consider how economics can inform public policy on environmental- resource problems.

TEXTBOOK & READINGS.

- Terry L. Anderson & Gary D. Libecap *Environmental Markets* (Cambridge University Press, 2014). This is a short supplemental text. [denoted **AL** in the schedule]
- Tietenberg, Tom and Lynne Lewis. *Environmental and Natural Resource Economics*, (10th Edition, Pearson, 2014) This is the main textbook. [denoted **TL** in the schedule]
- Additional materials are at CANVAS.

Testing Schedule and Due Dates:

August 23 (Tuesday)	First class day
October 13 (Thursday)	Exam I
December 8 (Thursday)	Exam II

NO EXAM DURING FINAL EXAM WEEK.

COURSE METHODOLOGY AND TEACHING FORMAT. The class periods will be devoted to lectures and discussion. I will assume that students have read the assigned material. I use PowerPoint and related graphics (e.g., maps, satellite pictures) to demonstrate use of natural resources. The lectures will expand and extend text presentation. I often call on students, so they should be prepared to discuss the material. There are two midterm exams, a series ungraded homework assignments, and about 10 graded and unannounced (short) in-class quizzes. Slight adjustments during the semester are possible.

GRADING POLICY. Grades will be based on the percent of correct answer on the exams and quizzes in the following manner: A+ 95, A 90%, A- 88 B+ 85 B 80 B-78 C+ 75 C 70 C- 68 D+ 65 D 60 D- 58. Tentative assignment weighting: Exams (150 each), quizzes 10 points each. For IU grading rules see: <http://registrar.indiana.edu/grades/grade-information.shtml>.

Attendance Policy. Class attendance is expected and encouraged, but not mandatory, because lectures are the primary means of conveying the material and the relative importance of the topics covered. Students are encouraged to ask questions and to stimulate discussion.

Make-up Examinations:

No make-up exams are given unless you have a documented IU-related reason for missing the exam. Please inform me well in advance.

Course Withdrawal: Course withdrawals are governed by IU guidelines: <http://registrar.indiana.edu/policies/course-withdrawals.shtml>.

Incomplete Policy: Incomplete policy follows IU guidelines: <http://registrar.indiana.edu/grades/grade-values/grade-of-incomplete.shtml>.

Special Needs and Accommodations. If you anticipate issues related to the format or requirements of this course, please meet with me, so we can ensure your full participation in the course.

Code of Student Rights, Responsibilities, & Conduct. IU guidelines can be found at <http://studentcode.iu.edu/index.html>.

364 LECTURE SCHEDULE

The contents and organization of this course may be changed at the discretion of the instructor.

DATE	LECTURE	TOPIC	READING
AUG. 23	1	Introduction	I.A.
25	2	Economic Approach to the Environment	I.B
31	3	Present and Future Values	I.C
Sept 1	4	Economic Development and the Environment	I.D
6	5	Property Rights	II.A
8	6	Property rights	II.A
13	7	Political Economy	II.B
15	8	Political Economy	II.B
20	9	Land	II.C
22	10	Nonrenewable resources	III.A
27	11	Nonrenewable resources	III.A
29	12	Resource Scarcity	III.B
Oct 4	13	Oil/gas energy	III.C
6	14	Oil/gas energy	III.C
11	15	Water	III.D
13		EXAM I	
18	16	Water	III.D
20	17	Renewable resources	IV.A
25	18	Forests	IV.B
27	19	Forests	IV.B
Nov 1	20	Fish & Wildlife	IV.C
3	21	Fish & Wildlife	IV.C
8	22	Fish & Wildlife	IV.C
11	23	Air & Water Quality I	V.A
15	24	Air & Water Quality II	V.A.
17	25	Valuing the Environment	V.B
19	26	Biodiversity and Endangered Species	V.C
		20-25 Thanksgiving recess	
29	27	Wildfire	V.D
Dec 1	28	Climate	V.E
6	29	Wrap-Up	
8		EXAM II	
		NO EXAM DURING FINALS WEEK	

364 OUTLINE & READINGS

I. INTRODUCTION TO ENVIRONMENTAL ECONOMICS

A. THE ECONOMIC APPROACH

Tom Tietenberg & Lynne Lewis. *Environmental and Natural Resource Economics* 10th Edition (Pearson, 2015).), chapter 1. [TL-1]

Terry L. Anderson & Gary D. Libecap *Environmental Markets* (Cambridge University Press, 2014). [AL-1]

B. FUNDAMENTALS OF ENVIRONMENTAL ECONOMICS

TL-2

C. Present and Future Values

TL-3

D. ECONOMIC DEVELOPMENT AND THE ENVIRONMENTAL QUALITY

TL-20

II. OWNERSHIP AND INSTITUTIONS

A. PROPERTY RIGHTS, TRANSACTION COSTS, AND THE COASE THEOREM

TL-2, AL-3,4

Pierson v. Post. Supreme Court of New York, 1805 (3 Cai. R. 175, 2 Am. Dec 264).

Haslem v. Lockwood. 37 Conn. 500 (1871).

B. POLITICAL ECONOMY IN A DEMOCRACY

TL-2, AL-2,5 & extra reading

C. Land Institutions

TL-10

III. NONRENEWABLE RESOURCES

A. THEORY OF DEPLETION

TL-5,6

B. NATURAL RESOURCE SCARCITY

TL-7

C. OIL/GAS ENERGY

TL-7

Barnard v. Monongehela 216 PA. 362 (1907)

D. WATER

TL-9, AL-6(135-143)

Coffin et al., v. Left Hand Ditch Co. 6 Colo. 443 (1882).

IV. RENEWABLE RESOURCES

A. BIOLOGICAL GROWTH AND THE THEORY OF HARVEST

TL-12

Dean Lueck. "Renewable Resource Models." Class materials.

B. FORESTS

TL-11

C. FISHERIES & WILDLIFE

TL-12, AL-4(107-111)AL-6(176-172) AL-7 (188-201)

V. ENVIRONMENTAL REGULATION AND MANAGEMENT

A. Air and Water Quality

TL-14,15, AL-6(155-167)

B. Valuing the Environment

TL-4

C. Biodiversity and Endangered Species

TL-12, Al-2(48-51)

D. Wildfire

Dean Lueck and Jonathan Yoder, "The Economic Foundations of Firefighting Organization" *Journal of Forestry* (2015).

E. Climate Change

TL-16, AL-7