

AREC 340: Introduction to Natural Resource Economics
Colorado State University
Spring Semester 2016
Live delivery: A206 Clark Building, 12:30-1:45 TTh
Simultaneous Online Delivery

Instructor: Dr. Andy Seidl, professor
TA: Mr. Patrick Hogan

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Hogan: B323 Clark Building. E: Patrick.hogan@colostate.edu

Office hours:

Hogan: Mon 12-2 pm; Wed 9-11 am and by appointment.
(Patrick is your first point of contact for outside of class assistance)

Seidl: Tues and Thurs 2-3:00 pm and by appointment.

Required Text:

Field, B.C. 2015. Natural Resource Economics: An Introduction, Third Edition. ISBN 978-1-4786-2780-7.
Waveland Press. 477 pp. http://www.coursesmart.com/IR/2894093/9781577665311?_hdv=6.8

Course Materials: The course Canvas website will be used to post video lectures, assignments and course notes. Please post your homework submissions there.

Course Description: This course is an introduction to natural resource economics. The tools learned in the principles of economics are applied to a diverse set of natural resource issues and policies including: forestry, mining, marine, climate change, wildlife, biodiversity, agriculture and recreation. In examining these issues, students will become better acquainted with resource economics models and decision-making, applied welfare analysis and multi-generational economic problems.

Objectives: The successful student will be...

- 1) aware of significant natural resource issues worldwide and across socioeconomic scales;
- 2) able to cast natural resource issues within an economics analytical framework;
- 3) able to write and converse about natural resource economics in depth and with rigor;
- 4) able to apply economic tools to natural resource problems when describing the efficiency and equity of the status quo and the consequences of proposed natural resource policy alternatives.

Grading:

The class will be graded in the following manner:

A >90% B >80% C >70% D >60% F <60%

Examinations (70% of total grade):

The examinations will be weighted 20% for the first Midterm, 30% for the second Midterm, and 20% for the Final Exam.

Examination questions will be short answer and graphical or mathematical illustrations of concepts and issues covered in class. Information will be taken from the text and from classroom discussion. Many current issues are

complex and require individual evaluation from a number of perspectives. In writing your exams, please restrict yourselves to the economic arguments supporting your position.

Examinations for online students will be proctored using the CSU OnlinePlus approved proctoring alternatives. These exams will be administered electronically and submitted electronically.

Examinations for live delivery students will be in class and students will be allowed no more than 75 minutes to complete each examination. This includes the final/3rd exam which is worth only 20% of the final grade and has a 120 minute block assigned to it by the university final examination protocols.

Homework (30% of total grade):

There will be three types of homework:

- 1) Graphical and/or mathematical applications of the concepts and tools taught in class. They will be due one week from the date of assignment, and submitted before 5 pm of the due date. Late submissions will be accepted until the exercise is returned to the class. Such submissions will be subject to a 10% per day decrease in total possible points obtainable. (3 @ 5% each)
- 2) Two analyses of a contemporary natural resource economic issue found in a newspaper or magazine article. These articles will be identified by the student based upon his/her interests. Submissions will provide a critical analysis of the problem *using economic concepts, graphical and/or mathematical representations* and be 1 page, single spaced, 11 pt font, in length. Please attach the article analyzed to the submission. Submissions will be turned in prior to 5 pm April 29. Late submissions will receive zero credit. Grading criteria will include an assessment of writing quality including logical support, grammar, spelling and form. (2 @ 5% each)
- 3) Two one page (single spaced, 11 pt font) reflections of a natural resource economics oriented seminar that you have attended during the semester, or have viewed via an electronic source. TED talks are ok. Some of the archived discussions found here are fine as well: <http://ecology.colostate.edu/distinguished-ecologist-videos.aspx>. The write-up should discuss what was presented and what you learned from the presentation through an economic lens. Grading criteria will include an assessment of writing quality including logical support, grammar, spelling and form. Submissions will be turned in prior to 5 pm April 29. Late submissions will receive zero credit. I will mention some of the relevant lectures in lectures and via email, but you are not restricted to these suggestions. If you have questions, please contact me for approval. (2 @ 2.5%)

All type 2 and 3 homework submitted before 5 pm March 11 (Spring Break) will be awarded a 5% bonus.

Schedule (subject to adjustment according to class needs):

Module 1: Introduction to Natural Resource Economics and Core Concepts

- Tues, Jan 19: Class introductions. TED talk: TEEB with Pavan Sukdev
Thurs, Jan 21: Chapter 2: Natural Resources & the Economy
Tues, Jan 26: Chapter 3: Willingness to Pay—Demand & Chapter 4: Supply/Costs
Thurs, Jan 28: Chapter 5: Efficiency & Sustainability
Tues, Feb 2: Chapter 6: Markets and Efficiency

Module 2: Market failure, public policy and analytical approaches

- Thurs, Feb 4: Chapter 7: Public Policy for Natural Resources
Tues, Feb 9: Chapter 8: Principles of Analysis
Thurs, Feb 11: Chapter 9: Valuation of Natural Resources
Tues, Feb 16: Millennium Ecosystem Assessment and TEEB.

Homework #1: Due

Thurs, Feb 18: Review Session.

Tues, Feb 23: Midterm Exam (20% of grade)

Module 3: Basic economic models of non-renewable and renewable resources

- Thurs, Feb 25: Chapter 10: Mineral economics
Tues, March 1: Chapter 11: Energy economics
Thurs, March 3: Chapter 12: Forest economics
Tues, March 8: Chapter 13: Marine resource economics

Module 4: More advanced models and research applications of complex resources

- Thurs, March 10: Chapter 14: Land economics
Friday March 11: All homework eligible for 5% bonus: Due before 5 pm
Tues, March 22: Economics of land use planning research
Thurs, March 24: Chapter 15: Water resources
Tues, March 29: Chapter 16: Economics of Agriculture.

Homework #2: Due

Thurs, March 31: Review Session.

Tues, April 5: Midterm Exam 2 (30% of grade)

Module 5: Non-consumptive uses of biodiversity and ecosystem services

- Thurs, April 7: Economics of outdoor recreation research
Tues, April 12: Chapter 17: Economics of outdoor recreation
Thurs, April 14: Chapter 18: Economics of wildlife management
Tues, April 19: Chapter 19: Economics of biodiversity protection
Thurs, April 21: NBSAPs and UN Convention on Biological Diversity Strategic Plan

Module 6: Economics, natural capital and development

- Tues, April 26: Chapter 20: Natural resources & economic growth
Thurs, April 28: International natural resource and development policy.

Homework #3: Due.

Friday, April 29: All remaining homework due.

Tues, May 3: Chapter 21: Natural resource decisions in developing countries

Thurs, May 5: Review session. Course evaluation.

Wed, May 11: Final Exam, 6:20-7:35 pm (20% of grade)

Academic Integrity Policy

This course will adhere to the CSU Academic Integrity [Policies and Guiding Principles](#) as found in the General Catalog and the [Student Conduct Code](#).

- Cheating—includes using unauthorized sources of information and providing or receiving unauthorized assistance on any form of academic work or engaging in any behavior specifically prohibited by the faculty member.
- Plagiarism—includes the copying of language, structure, ideas, or thoughts of another, and representing them as one's own without proper acknowledgment.
- Unauthorized Possession or Disposition of Academic Materials—includes the unauthorized selling or purchasing of examinations or other academic work; stealing another student's work; unauthorized entry to or use of material in a computer file; and using information from or possessing exams that an instructor did not authorize for release to students.
- Falsification—includes any untruth, either verbal or written, in one's academic work.
- Facilitation—includes knowingly assisting another to commit an act of academic misconduct.

At a minimum, violations will result in a grading penalty in this course and a report to the Office of Conflict Resolution and Student Conduct Services.

CSU Honor Pledge

Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Because academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens, I will ask that you affirm the CSU Honor Pledge as part of completing your work in this course. *While you will not be required to affirm the honor pledge, you will be asked to affirm the following statement at the start of your exams:*

"I have not given, received, or used any unauthorized assistance."

Further information about Academic Integrity is available at CSU's [Practicing Academic Integrity](#).

System, Multimedia, and Software Requirements for Online Students

Having trouble with the multimedia in this course? See the solutions below. Also, it is highly recommended that you access your course via a **high-speed Internet connection**.

- Problems with opening PDFs?
 - Download [Adobe Reader](#).
- RamCT Blackboard acting funny?
 - Download the correct version of [Java](#) for RamCT Blackboard.
- YouTube videos not playing?
 - Download [Flash Player](#).
- Videos not opening or playing on your Mac?
 - Download [Windows Media Components for QuickTime](#).
- Can't open content created with Microsoft Office Products? Download the following viewers:
 - [Word Viewer](#)
 - [PowerPoint Viewer](#)
 - [Excel Viewer](#)
 - [Microsoft Office Compatibility Pack for Word, Excel, and PowerPoint File Formats](#)
- Still having issues:
 - Call the **CSU Help Desk at 970-491-7276** or [Email Help Desk Support](#)

You must have speakers installed and working properly on your computer before beginning the course.

You may need access to Microsoft Word, PowerPoint, and/or Excel to complete assignments. If you do not have access to the Microsoft Office applications, you may use one of the following free resources that allow you to save your files with Microsoft Office file extensions (.doc, .docs, .ppt, .xls.):

- [Google Apps for CSU](#)—a free, outsourced communications suite endorsed by The University Technology Fee Advisory Board (UTFAB)
- [Open Office](#)—an open source productivity suite

Suggested Study Methods

Online education requires skills and habits that may be less essential in traditional courses. In order to be successful in your online course you will need:

- Space—Establish a comfortable and well-organized physical workplace.
- Time management skills—Set personal study and "classroom" time as you would do for a traditional course.
- Organization skills—Print out all class material (modules, PowerPoints, assignments, additional resources, and any work you generate) and keep everything in a single location. Maintain electronic backups of all class materials.
- Communication skills—Demonstrate a willingness to interact with your instructor and classmates through email, phone calls, discussion boards, and active participation in all class activities.
- Initiative—Seek help from your instructor and classmates, ask questions as they arise.
- Discipline—Pace yourself, complete all activities and assignments before the due date, follow through on all class requirements to completion.

The more closely you adhere to the recommendations above the greater your chances of having a successful semester and a rewarding online experience.