

Natural Resource Economics and Valuation, FOR 6543

1. Overview

This course covers the role of economics in decisions that affect natural resources and the environment. The overall objective of this course is to provide students with conceptual insight, problem-solving skills, and general knowledge needed to better analyze and solve natural resource and environmental issues and problems from an economic perspective which recognizes the important linkages between economic, environmental, and ethical systems. Students will learn and apply economic concepts to issues that involve the sustainable use of natural resources and how to evaluate projects and regulations designed to protect environmental quality. Applications we will discuss include nonrenewable resource use, renewable resource use, land and water resources, environmental pollution, conservation, and investment and business concerns including valuation.

- 3 Credits
- Summer C
- 100% online, asynchronous
- <http://elearning.ufl.edu>

Course Prerequisites: none

Instructor: Dr. Andres Susaeta, 315 Newins Ziegler Hall, School of Forest, Fisheries and Geomatics Sciences, University of Florida; asusaeta@ufl.edu; 352-846-0877

- Please use the Canvas message/Inbox feature for fastest response.
- Office hours: available by email or phone T-W: 10-11 AM; office visits or virtual meetings available by appointment.

Textbook(s) and/or readings: John C. Bergstrom and Alan Randall. 2010. *Resource Economics: An Economic Approach to Natural Resource and Environmental Policy*, 3rd ed. Edward Elgar Publishing Company.

Print versions available at Amazon.com or other book sellers. Electronic version available at: <https://www.ebooks.com/en-us/book/2640733/resource-economics/john-c-bergstrom/>

Supplemental Texts (any readings from these will be posted on Canvas):

Field, Barry C. 2016. *Natural Resource Economics*, 3rd edition. Waveland Press. 444 pp.

Suggested Readings (available through Canvas): Suggested readings will be posted periodically throughout the semester and correspond to the current lectures.

2. Learning Outcomes

At the end of this course, each student will be able to:

- Utilize and interpret models used in economic decision-making.
- Apply key themes, principles, terminology, and relevant economic theory to real world problems.
- Analyze, from an economic perspective, the relevance of resource use, allocation, and policy to public decision-makers, as well as private individuals and firms.

3. Course Logistics

This course is entirely web-based and students may access lectures, readings, and supporting materials as they become available each week.

The course is designed to be asynchronous. Learning modules consisting of a lecture, readings, supporting material, and quizzes are provided online for each topic. Learning modules build on previous modules so you should complete the learning modules in the order presented. Students' participation is required in this course (see assignments and deliverables).

Each learning module might have required readings beyond the lecture. This information will be covered on quizzes and assignments. These files will all be made available for you to view on your computer, save, or print. There may be references to additional readings and resources if you desire further investigation of a topic.

Technology Requirements:

- A computer or mobile device with high-speed internet connection.
- A headset and/or microphone and speakers; a web cam is suggested.
- Latest version of web browser. Canvas supports only the two most recent versions of any given browser. [What browser am I using?](#)

3.1 Assignments & Deliverables

Participation

In order to increase participation, you will present a topic of discussion about the lectures and readings that are part of this course. Each week, each student will pose an original question for discussion, which is to be commented on by the other students. This activity will count toward your class participation grade.

Quizzes & Exams

There will be 8 online assignments (quizzes) . Each assignment will be due the following week. Each assignment relates to the corresponding textbook chapter and supplemental assigned readings in Canvas.

Paper review

Each student will have to choose an academic paper related to resource economics and write a review of it for your peers— maximum of 4 pages (excluding references, tables and figures), double- spaced, 12 point font. Please send me your paper choice(s) to discuss the suitability of the paper(s) to select your final paper at least 5 days before the deadline. The **deadline to select your final paper is July 2nd**. The **deadline for the final paper is August 2nd**. Each paper review will be revised by one peer. Each peer has to provide a critique of the paper review using the same methodology explained above – maximum 1 page, double spaced, 12 point font. **The deadline for the peer review is August 8th**.

3.2 Grades & Grading Scale

| | |
|---------------|------------------|
| Participation | 25% |
| Quizzes | 50% (8 at 6.25%) |
| Paper review | 25% |

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Grading Scale (%)

| | |
|----|----------|
| A | 90-100 |
| B+ | 85-89.99 |
| B | 80-84.99 |
| C+ | 75-79.99 |
| C | 70-74.99 |
| D+ | 65-69.99 |
| D | 60-64.99 |
| E | < 60 |

4. Course Content

Learning Modules

BR= Bergstrom & Randall; F=Field; O= Others

| Week | Module | Readings | Quiz |
|------|---|------------------------|------|
| 1 | Issues in Natural Resource Economics & Visions of the Future | BR: CH 1-4 F: CH 1 | |
| 2 | The Economic Approach to Natural Resources <i>Normative criteria for decision making; the optimal outcome</i> | O | Q1 |
| 3-4 | Microeconomic Concepts Applied to Natural Resources <i>Resource supply and scarcity; economic efficiency and risk; criteria for resource and environmental policy</i> | BR: CH 2-3, 5-8 | Q2 |
| 5-6 | Property Rights, Externalities and Natural Resource Problems <i>Market failures; Institutional framework</i> | BR: CH 9,10, 11, 16 | Q3 |
| 7 | Summer Break (one week) | | |

| | | | |
|----|--|-------------------|--|
| 8 | Valuation of Natural Resources <i>Types of values; issues in benefit estimation; discounting; benefit cost analysis; non-market valuation</i> | BR: CH 12-13 | Q4, select final paper |
| 9 | Economics of Nonrenewable Resources <i>Optimal rate of extraction; Hotelling's rule</i> | BR: CH 14 | Q5 |
| 10 | Economics of Forestry <i>The maximum sustained yield; the single rotation the multiple rotation</i> | O | Q6 |
| 11 | Economics of Fisheries and Wildlife <i>The yield effort-function; the static model of open access and efficient harvest; population growth & open access-hunting</i> | F: CH 13, 18 O | Q7 |
| 12 | Sustainable Development <i>Sustainability; ethics; institutional response</i> | BR: CH 19-22 | Q8 final paper peer review of final papers |

5. Readings

Field, B. 2008. Introduction. In *Natural Resource Economics :an Introduction*. 3rd edition. Waveland Press, pp 3-34.

Field, B. 2008. Marine Resources. In *Natural Resource Economics :an Introduction*. 3rd edition. Waveland Press, pp 231-253

Field, B. 2008. Economics of Wildlife Management. In *Natural Resource Economics :an Introduction*. 3rd edition. Waveland Press, pp 345-369

Resources for the Future, 2012. How should benefits costs be discounted in an intergenerational context? <https://www.resourcesmag.org/archives/how-should-benefits-and-costs-be-discounted-in-an-intergenerational-context/>

Tietenberg, T., Lewis, L. 2000. Valuing the Environment: Concept: In *Environmental and Natural Resource Economics*, 5th edition. Adisson-Wesley. Pp. 16-28.

6. Policies and Requirements

This syllabus represents current plans and objectives for this course. As the semester progresses, changes may need to be made to accommodate timing, logistics, or to enhance learning. Such changes, communicated clearly, are not unusual and should be expected.

6.1 Late Submissions & Make-up Requests

It is the responsibility of the student to access on-line lectures, readings, quizzes, and exams and to maintain satisfactory progress in the course.

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Computer or other hardware failures, except failure of the UF e-Learning system, will not excuse students for missing assignments. Any late submissions due to technical issues MUST be accompanied by the ticket number received from the Helpdesk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request consideration.

For computer, software compatibility, or access problems call the HELP DESK phone number—352-392-HELP = 352-392-4357 (option 2).

6.2 Semester Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning.

At approximately the mid-point of the semester, the School of Forest Resources & Conservation will request anonymous feedback on student satisfaction on various aspects of this course. These surveys will be sent out through Canvas and are not required, but encouraged. This is not the UF Faculty Evaluation!

At the end of the semester, students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

6.3 Netiquette: Communication Courtesy

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. Failure to do so may result in loss of participation points and/or referral to the Dean of Students' Office. <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.docx>

6.4 Academic Honesty Policy

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."*

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes,

exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct or appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated.

Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see:

<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

6.5 Inclusive Learning Environment

This course embraces the University of Florida's Non-Discrimination Policy, which reads,

The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act.

If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see the instructor or refer to the Office of Multicultural & Diversity Affairs website:

<http://multicultural.ufl.edu>.

6.6 Services for Students with Disabilities:

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. 0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

6.7 Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

7. Campus Helping Resources

For issues with technical difficulties for e-learning in Canvas, please post your question to the Technical Help Discussion in your course, or contact the UF Help Desk at:

- Learning-support@ufl.edu | (352) 392-HELP - select option 2 | <http://elearning.ufl.edu>
- Library Help Desk support <http://cms.uflib.ufl.edu/ask>
- SFRC Academic Hub <https://ufl.instructure.com/courses/303721>

7.1 Student Life, Wellness, and Counseling Help

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- Counseling and Wellness resources <http://www.counseling.ufl.edu/cwc/>
- U Matter, We Care <http://www.umatter.ufl.edu/>
- Career Connections Center <http://career.ufl.edu/>
- Other resources are available at <http://www.distance.ufl.edu/getting-help> for online students.

7.2 Student Complaint Process

The School of Forest Resources & Conservation cares about your experience and we will make every effort to address course concerns. We request that all of our online students complete a course satisfaction survey each semester, which is a time for you to voice your thoughts on how your course is being delivered.

If you have a more urgent concern, your first point of contact should be the SFRC Academic Coordinator or the Graduate/Undergraduate Coordinator for the program offering the course. You may also submit a complaint directly to UF administration:

- Students in online courses: <http://www.distance.ufl.edu/student-complaint-process>
- Students in face-to-face courses: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>