

University of Georgia
Department of Agricultural and Applied Economics

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Office: 314B Conner Hall, 542-0767
Office Hours: MW, 3:30-4:30 or call or e-mail

Spring 2002
Classroom: 212 Conner Hall
Class Hours: MWF, 2:30-3:20

AAEC 3060 PRINCIPLES OF RESOURCE ECONOMICS

Course objective is to introduce you to natural resource management issues and broaden your comprehension of economic principles through applications to these issues. By the end of the term, you should be able to: 1) explain the significance of current resource issues, 2) use economic principles to evaluate resource management problems, 3) explain economic and environmental tradeoffs required by management decisions, 4) find up-to-date information on resource issues through the Internet, and 5) effectively communicate your analysis in writing and orally.

Required texts: J. R. Kahn. The Economic Approach to Environmental and Natural Resources. Second edition. Orlando, FL: The Dryden Press, 1998.

Lohr, L. Course Packet for Principles of Resource Economics. 2001. Available from instructor.

Various readings you will download from the World Wide Web, as assigned.

Readings are from the required texts and from assigned articles. You should complete readings prior to class meetings scheduled for the topic in order to enhance your involvement in class discussions.

Prerequisite for this class is AAEC 2580 or ECON 2106. You should be familiar with the basic economic model - supply and demand curves - and be able to understand and interpret two-dimensional graphs.

Grades will be assigned on the following basis:

| | |
|----------------------------|----------|
| Homework Assignments | 25% |
| Exam 1 | 25% |
| Exam 2 | 25% |
| Exam 3 | 25% |
| Final Exam | optional |
| TOTAL | 100% |

Attendance is expected. You are responsible for all material covered in class and for assignments due on days absent, unless excused by the instructor. If you must miss class, please contact the instructor by phone, e-mail or in person in advance.

Final grades will be assigned as follows:

| Weighted Percentage of Possible Points | Grade |
|--|-------|
| 88 - 100 | A |
| 78 - 87 | B |
| 68 - 77 | C |
| 58 - 67 | D |
| 0 - 57 | F |

Homework assignments are due at the beginning of class on the date assigned unless otherwise indicated. *Assignments not submitted by assigned dates will receive a grade of zero. Failure to turn in at least 7 of the 8 homework assignments on time will result in a one-letter reduction in your final grade.* That is, your final score will be calculated for all homework, extra credit and exams completed, and the appropriate letter grade assigned to that score. The grade reduction will be made from that calculated grade. Extenuating circumstances may alter this policy, upon approval by the instructor.

In-class assignments give an opportunity to evaluate problems in more detail and look at real world policy and management situations. Extra credit may be earned on some in-class assignments. Discussions may be one-on-one, in small groups, or with the entire class. You are expected to participate fully in discussions by reading assigned material, completing written assignments and discussing questions.

Computers are available to you in the AAE undergraduate computer lab in Room 202 Conner Hall. You will have an account that permits you to access software on the AAE server. In addition, you will need a UGA MyID in order to access WebCT on Arches. To obtain a UGA MyID account, visit the site www.uga.edu/myid/ and follow the instructions given. Computer staff in the lab can answer questions about the software. An optional session, to be arranged, will be held for those who want to learn how to use e-mail and the World Wide Web.

Examinations are tentatively planned for **Friday, February 1, Monday, March 25, and Wednesday, April 24** during class. All examinations are essay format.

Final examination is scheduled for **Tuesday, May 7 from Noon to 3:00 pm in Room 212**. The final is optional. If you take the final, it will replace your lowest exam grade and count for 25% of your course grade.

COURSE OUTLINE FOR AAEC 3060

Chapters in parentheses refer to text material. Additional readings will be assigned prior to use dates.

Introduction (Chapter 1)

1. Resource Taxonomy
2. Interaction Among Physical, Natural, and Economic Systems

Valuation (Chapter 4, 87-92, 107-127 and Appendix 2.A, 34-37)

1. Purpose of Valuation
2. Use and Nonuse Values
3. Measuring Costs and Benefits
4. Benefit-Cost Analysis
5. Irreversibility, Uniqueness and Uncertainty
6. Other Valuation Methods and Criteria

Resource Scarcity (Chapter 18 and Chapter 2, 28-31)

1. Absolute scarcity
2. Relative scarcity
3. Irreversibility, Exhaustability and Substitution
4. Intertemporal scarcity (Chapter 2, 28-31)
5. Sustainability

EXAM 1**Markets and Resource Management (Chapter 2)**

1. Concept of Property Rights
2. Rivalry, Exclusivity, Congestibility
3. Economic Efficiency
4. Market Failures

AAEC 3060 COURSE OUTLINE

2

Multiple Use Management: Forests (Chapter 11)

1. Attributes Affecting Management of Forests
2. Biologically Sustainable vs. Economically Efficient Harvest
3. Optimal Harvest Accounting for Time Value
4. Management of Multiple Use Forests
5. Sustainable Forests

Open Access Management: Fisheries (Chapter 10)

1. Attributes Affecting Management of Fisheries
2. Biologically Sustainable vs. Bioeconomically Sustainable Harvest
3. Optimal Harvest Accounting for Open Access
4. Managing Open Access Fisheries for Sustainability

EXAM 2**Preventing Productivity Loss: Agricultural Lands (Chapter 16)**

1. Definitions and Concepts
2. Agriculture-Environment Linkages
3. Problems with Soil, Pesticides, Fertilizers
4. Sustainable Agricultural Production

Preventing Deforestation: Tropical Forests (Chapter 12)

1. Definitions and Concepts
2. Benefits of Tropical Forests
3. Causes of Deforestation
4. Managing Tropical Forests for Sustainability

AAEC 3060 COURSE OUTLINE 3
Preventing Extinction: Biodiversity (Chapter 13)

1. Definitions and Concepts
2. Causes of Extinction and Endangerment
3. Costs of Losing Habitat and Biodiversity
4. Managing Biodiversity for Sustainability

EXAM 3

FINAL EXAM - May 7