I. COURSE DESCRIPTION

The natural environment is under continuing pressure from use by individuals, development, and climate change at the same time nature provides a tremendous amount of services that impacts human well-being. The driving question is: How do we manage these resources, given the pressures they face, in a manner that minimizes the impact on ecosystem services. In this course
we will introduce the fundamental concepts of neoclassical microeconomics and ecological economics applied to environmental and sustainability issues. We will then apply those concepts to specific management issues.

II. COURSE AUDIENCE

Ph.D. students in the Coastal and Marine Science System Science or Marine Biology doctoral programs are the primary audience for this course. Secondary audience includes Masters graduate students in Biology, Environmental Science, Marine Biology, Fisheries and Mariculture, and Business.

III. LEARNING OUTCOMES

At the conclusion of this course the student should be able to:

1. Describe and explain the current issues surrounding resource management from an economic perspective and the tools available to inform decision making. Current issues include valuation of ecosystem services and cost-benefit calculations used by resource managers and the private sector.
2. Determine the appropriate economic method to be used in answering a particular resource management or sustainability issue.
3. Perform a basic economic analysis on a particular resource management or sustainability issue.

IV. COURSE TOPICS

Approximately the first half of the course will be dedicated to developing our toolbox. In the second half of the course we will apply those tools to specific environmental and sustainability issues from both public and private perspectives.

V. INSTRUCTIONAL METHODS AND ACTIVITIES

To better achieve the objectives of the class, members will be divided up into pods (groups). Since the members of our class come from different backgrounds, the pods will be balanced to include the various disciplines. The course will be taught in a lecture, discussion, and case-study format. Students will be assigned readings from the bibliography and will be expected to discuss those readings in class.

VI. EVALUATION AND GRADE ASSIGNMENT

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<td>Tests (25% each * 2)</td>
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<td>Project</td>
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<td>Article Reviews &amp; Presentations</td>
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<td>Quizzes &amp; Homework</td>
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Total 100%
The first test will be scheduled when we have completed studying the economic foundations and the second test will cover the application of economic theory to specific environmental and sustainability issues. Quizzes and/or homework will be given periodically. The weight of the homework will be twice as much as the quizzes. Full participation by all students is expected.

**Project**

A semester project is to be completed by each pod. Since the members of the pods will come from different disciplines this is a unique opportunity to meld the theory and tools developed in this class with theories and tools from other classes and disciplines. The project will focus on a resource sustainability issue that is local or regional.

**Article Reviews and Presentations**

The student asked to review and present at least one article from the course bibliography and one additional article. The grade will be based upon the student’s demonstrated comprehension of the article and their articulation of that knowledge.

**VII. TOPICS AND CHAPTERS TO BE COVERED**

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<tr>
<th>The Foundation</th>
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<tr>
<td><strong>Tietenberg and Lewis</strong></td>
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<td>Visions of the Future</td>
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<td>Valuing the Environment: Concepts</td>
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<td>Valuing the Environment: Methods</td>
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<td>Property Rights, Externalities, Env. Prob</td>
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<td>Sustainable Development</td>
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<td>Natural Resource Economics: Overview</td>
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<td>Environmental Economics: Overview</td>
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<td>The Quest for Sustainable Development</td>
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<th>Costanza et al.</th>
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<td>Humanity’s Current Dilemma</td>
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<td>Historical Development of Economics and Ecology</td>
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**Bibliography**


Taylor, B and M. Zimmerman, (n.d.) *Deep Ecology*


**Coastal and Marine Ecosystem Services**

*Tiutenberg and Lewis*
Common Pool Resources: Fisheries and Other Commercially Valuable Species Chapter 13
Water Chapter 9

*Costanza et al.*
Problems and Principles of Ecological Economics Chapter 3
Policies, Institutions, and Instruments Chapter 4

**Bibliography**


VIII. DROP COURSE POLICY

The official deadline for students to drop a course at TAMU-CC is November 6.

IX. ATTENDANCE POLICY

Students are held responsible for class attendance and are advised that student performance is directly correlated with class attendance and participation. Class attendance, however, is a necessary but not sufficient condition for active class participation, the latter of which results in good performance. Students absent from classes are responsible for making arrangements to submit assignments due, material discussed, and announcements made in class. Assignments, exams and other course requirements missed due to absences cannot be made up after the due date except for medical emergency, in which case a doctor’s official documentation of illness is required.

X. PROFESSIONALISM

1. Out of respect for your fellow classmates mobile phones are to be turned off and placed in your bag or pocket. Use of a phone during class, including text messaging, is not allowed. If you are caught using a phone the instructor reserves the right to confiscate the phone and return it at his convenience.

2. Habitually entering or leaving the classroom during class time without the consent of the instructor is not allowed as it disturbs the class.

3. Talking or chit-chatting with other students, and any other activities that are disruptive to the learning environment are also not allowed.

4. Students caught engaging in such activities should expect class or course dismissal along with a letter of reprimand placed in their academic files.

5. Should a faculty member discover that a student has committed plagiarism; the student should expect course dismissal along with a letter of reprimand placed in their academic files.

XI. STUDENTS WITH DISABILITITES AND VETRANS SERVICES

Texas A&M University-Corpus Christi is committed to providing persons with disabilities an equal opportunity to access campus facilities, resources and programs. The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. Support and accommodations are also available for returning veterans who experience cognitive and/or
physical access issues in the classroom or on campus. Our Office of Disability Services arranges such support and academic accommodations. To make a request, or for more information, call (361) 825-5816 or visit Driftwood 101. It is important to contact the Office of Disability Services in a timely fashion as it will take time for them to review requests and prepare accommodations and accommodation letters.

XII. GRADE APPEAL PROCESS

As stated in the Texas A&M University-Corpus Christi University Rules and Procedures (Section B [Academic Program], Part 13 [Students]: 13.02.99.C2 [Student Grade Appeals] and 13.02.99C2.01 [Student Grade Appeal Procedures]), a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is on the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, consult the University Rules and Procedures specified above (accessible through the University Rules and Procedures website at http://www.tamucc.edu/provost/university_rules/index.html). For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

**The instructor reserves the right to modify the course content at any time.**