Monika Thomas

De Anza Community College

Environmental Economics

Office Hour via zoom (optional): Th 9-10 AM, or by appointment.

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Course Outline: Environmental Economics (ECON 3)

Course Description

This course will prepare you to analyze current economic and political events and debates with respect to economic growth and with respect to preserving the environment and conserving scarce natural resources. The focus is on exploring social, economic, and environmental issues in our communities and beyond. The course serves as an introduction to the economics of the environment and natural resources, with an emphasis on environmental management and policy from an economic perspective. We will explore general resource and environmental issues and problems, such as those involving energy, water, agriculture, forests, biodiversity, fisheries, and address pollution and environmental degradation. We apply microeconomic principles, models, and analytical tools to evaluate problems of environmental deterioration caused by economic activities (and human behavior in general). We also discuss current global concerns, such as market failures, population growth, climate change, sustainable development, and a rationale for government involvement as well as private solutions in the market-based economy.

This course will also prepare you to make important choices in your personal and professional life, by 'thinking like an economist' who manages to keep the health of the environment in mind while achieving a higher and more compassionate standard of living.

Student Learning Outcomes (SLOs)

After successfully completing this course, it is expected that you are able to

1. Demonstrate an understanding of environmental responsibility and natural resource scarcity, and its role within economic science and economic growth.
2. Demonstrate a basic understanding of the interdependent relationship between the economy and the environment, and the long-term thinking necessary to grow the world economy while simultaneously protecting environmental resources.
3. Evaluate the marginal benefits and marginal costs of environmental cleanup and contrast the optimal solution of the free market versus competing views of valuing the environment.
4. Evaluate outcomes in markets with negative externalities, government policy responses and their effectiveness in the US and global economy.

Required Course Materials and Readings

- **Textbook**: **Tietenberg, Tom and Lewis, Lynne. 2010. *Environmental Economics and Policy, 6th ed.*** available in the De Anza Bookstore. You also will find used copies online. There is also an inexpensive international edition. Reading assignments from the textbook are listed according to the schedule below. It is helpful to do the readings during the week they are assigned. It will help you with a good understanding of the material, and prepare you for solving problem sets and doing well on exams.
- **It is important that you stay informed about current events that relate to the environment and the economy.** The New York Times, the BBC, The Economist, and/or local papers are good examples of sources for current news and events regarding the environment and the economy.
- **Problem Sets, exams, worksheets, and additional readings will be posted in your Canvas modules** (you find access to it on your De Anza Portal).

Evaluating Student Progress

Some assignments will be your individual effort, such as discussions and exams.

At the same time you will also be part of a **Familia** (**this is your team!)** within the class, engaging in various problem-solving activities together with your familia members. This will be a **group effort.**

Participation (20%): team work. Collaborate with your familia members and submit research on a variety of case studies.

Dialogues (20%) (individual effort, interactive): research the topic and prompts, then post your reply. Also, respond to two peers and learn about different perspectives from your fellow classmates.

Problem Sets and worksheets (team work & group effort) (**20%**) *:* several problem sets are designed to reinforce course material and prepare you for the exam. You will collaborate with your familia members, and either distribute the questions relatively equally or solve questions together. You can note on your final submission which person solved an individual problems). Each problem set is a 'product' that your group (familia) creates together and therefore each person within your familia usually receives the same grade (unless someone is absent or does not participate).

Midterm Exam (**20%**): **individual effort.** The midterm will cover all material (readings, problem sets, lectures) covered up to *the exam date*. The format will be short essay questions.

Final Exam: (**20%**): **individual effort***:* The final exam will cover all material (readings, problem sets, lectures) covered after the midterm and up to *the exam date*. The format will be short essay questions.

- **Participation 20%**
- **Dialogues: 20%**
- **Problem Sets and Worksheets: 20%**
- **Midterm: 20%**
- **Final Exam: 20%**
- **XCR: 5%**

Grading Scale

Grade	Range
A+	100% > 95.5%
A	95.5% > 92.5%
A-	92.5% > 89.5%
B+	89.5% > 86.5%
B	86.5% > 79.0%
B-	79.0% > 73.5%
C+	73.5% > 69.5%
C	69.5% > 59.5%
D+	59.5% > 56.5%
D	56.5% > 50.0%
F	50.0% > 0.0%

Course Policies

- All students are expected to treat their fellow students and the instructor with **respect**. This is essential for creating an environment conducive to learning and the exchange of ideas.
- I expect that all students will act in accordance with the De Anza Code of Conduct Policy.
- Academic dishonesty, cheating and plagiarism will not be tolerated. Academic dishonesty would be a violation of the trust that I place in you. This will place you in a failing position and the incident will have to be reported to the Division Dean.

Student Resources, and Accessibility Services

Environmental economics strives to be an all-inclusive course that is accessible to everyone. This means we welcome and appreciate students from all backgrounds and honor their unique abilities and strengths. We also recognize that learning takes place in different ways, and therefore some students may benefit from access to additional tools and / or accommodations.

De Anza College offers a variety of student support services! Their office is located on the De Anza College campus, Learning Center West, Room LCW 110. Please visit the De Anza Disability Services (DSS) Program Website for detailed information about the following resources and support services:

- alternate media services,
- computer accessibility lab,
- extended time on exams,
- note-taking services
- mobility assistance,
- deaf and hard of hearing services, and interpreting and captioning services,
- De Anza Hope Program (for students with intellectual disabilities), as well as

You can reach the DSS office Monday-Thursday, 8 a.m.-3 p.m., closed on Fridays. You can also contact the office via:

- email: dss@deanza.edu or
- phone: (408) 430-7681 or
- visit the DSS Virtual Help Desk - Speak to a DSS specialist live (zoom link and icon provided on the web page). No appointment needed.

Please visit the Writing and Reading Center if you think you may need additional support relating to writing.

Drop Policy

It is the student's responsibility to officially drop the class by the official drop deadline. You must initiate the drop procedure with the Records and Admissions Office on or before the drop date.

- Last day to Drops (without a "W" grade): Sunday, October 9, 2022 (with full refund).
- Last day for Adds (no exception): Saturday, October 8, 2022
- Last day for Drops (with a "W"): Friday, November 18, 2022

Course Outline

We will closely follow the outline of the textbook, however this outline is tentative, and subject to change. We will **only cover selective material from each of the chapters in the textbook.**

September 26 - 29 (Week 1)

Introduction / Course Overview Ch.1

Self Assessment

Ice Breaker: **Dialogue 1**

Valuing the Environment: Concepts Ch.2

What is Your Vision of the Future: **Dialogue 2**

October 3 - 6 (Week 2)

Measuring the Value of the Environment: Methods Ch.3

Problem Set 1

October 10 - 13 (Week 3)

Property Rights, Negative Externalities, and Environmental Problems Ch. 4

Coase, Ronald H. 1960. "The Problem of Social Cost," Journal of Law & Economics, 3: 1.

Hardin, Garrett. 1968. "The Tragedy of the Commons," *Science*, 162: 1243-48.

October 17 - 20 (Week 4)

Sustainable Development: Defining the concept Ch.5

Problem Set 2

October 24 - 27 (Week 5)

The Population Challenge Ch.6

Case Study 1: Food Security: definitions; features of food insecurity; connecting food security to the concepts of weak sustainability and environmental sustainability.

October 30 - November 3 (Week 6)

Midterm

Natural Resource Economics: An Overview Ch.7

Energy Ch.8

Fossil Fuels and Climate Change: **Dialogue 3**

November 7 - 10 (Week 7)

Water Ch.9

Agriculture Ch.11

Worksheet 1: Green Revolution – Curse or Blessing? Discovering and discussing the pros and cons of the green revolution; which countries did or did not benefit and why (for example Sub-Saharan Africa).

November 14 - 17 (Week 8)

Forests Ch.12

Debt-for-Nature Swaps

Fisheries Ch.13

Case Study 2: Hunger: definitions; features of hunger; connecting hunger to food justice; discussing economic incentives that can help to achieve food justice.

November 21 - 24 (Week 9)

Environmental Economics: An Overview Ch.14

Stationary-Source Local Air Pollution Ch.15

Worksheet 2: Forests Explore the connection / trade-off between forests and agriculture; values and services that forests provide; connection to climate change; public policies that impact sustainable or unsustainable growth of forests

Case Study 3: Is aquaculture a solution for the overfishing problem? For food security? Compare policies and results in different regions (for example Malawi, Bangladesh, Thailand, Indonesia, China).

November 28 - December 1 (Week 10)

Climate Change Ch.16

Case Study 4: Environmental Justice: Definitions; climate refugees; economic incentives and policies to advance environmental justice.

December 5 - 8 (Week 11)

Mobile -Source Air Pollution: Transportation Ch.17

International Agreements: Paris Agreement, Climate Change Meeting (Scotland, November 2021)

December 12 -- 14 (Week 12)

Final Exam