

ECON 335-DL1: Environmental Economics Spring 2024 Jan 16, 2024 - May 08, 2024 Asynchronous Online	Instructor: Ms. Hairuo Tan E-mail Address: htan6@gmu.edu Office Hour: By appointment (Zoom)
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Course Information from the University Catalog:

Credits: 3

Microeconomic analysis of environmental problems. Topics include externalities and market failure, alternative solutions and policies, problems in monitoring and enforcement, economic analysis of development of legislation and regulation, and applications to current policy issues. Limited to three attempts.

Specialized Designation: Green Leaf Focused Course

Recommended Prerequisite: ECON 103 and 104.

Course Format:

This is a fully online course in the asynchronous mode. There is no scheduled meeting time. All course material, including lecture slides, quizzes, exams, and information for term project will be posted on Blackboard. Other relevant information will be sent to students' Mason e-mail accounts.

Technical Requirements:

Students are required to regularly access their Mason email and Blackboard accounts. Email can be accessed at <http://mso365.gmu.edu/>, and Blackboard at <https://mymasonportal.gmu.edu/>. If your personal device does not meet these requirements, GMU's computer labs are available for use. For lab locations and additional information, please visit <https://its.gmu.edu/service/computer-labs/>.

Learning outcomes:

1. Application of microeconomic theories in the context of environmental problems
2. Benefit-cost analysis
3. Evaluation of market and non-market based environmental policies
4. Familiarization with pollution control in the U.S. and global environmental issues

Important Dates:

First Day of Spring Classes	Tue. Jan 16, 2024
Last Day to Drop: With 100% Tuition Refund	Tue. Jan 30, 2024
Last Day to Drop: With 50% Tuition Refund	Tue. Feb 6, 2024
Spring Recess (no classes)	Mon. Mar 4, 2024 - Sun. Mar 10, 2024
Midterm Exam	Available on Blackboard: March 11, 2024 Due: March 17, 2024
Term Project	Mon. Apr 29, 2024
Final Exam	Available on Blackboard: May 1, 2024 Due: May 6, 2024

Required Textbook:

Environmental Economics: An Introduction, 8th Edition by Barry Field, Martha K Field ISBN: 9781260243062 [You may also use the 7th edition]

Other readings will be posted on Blackboard.

Recommended Textbook:

Universal Economics by Armen A. Alchian and William R. Allen ISBN: 9780865979062

Grading:

Weekly Quizzes	30 %	A	90.00 – 100.00
Midterm Exam	30 %	B	80.00 – 89.99
Final Exam	30 %	C	70.00 – 79.99
Term Project	10 %	D	60.00 – 69.99
		F	<60.00

Weekly Quizzes: There will be 12 weekly quizzes. Each of them has approximately 15 multiple choice questions. The two lowest scores will be dropped. Each of the remaining 10 quizzes is worth 3 % of the total grade. Starting from the second week, a quiz will be posted on Blackboard every Wednesday at 12:00 PM (ET) (except for the weeks of Spring Recess and Midterm Exam) and will be due on the next Wednesday at 11:59 PM (ET). Quizzes are not timed, but only one submission is allowed. A quiz can be saved and resumed before it is due.

Late Policies: A **12-hour “grace period”** applies to each quiz. For example, the first quiz will be due on Wednesday, January 31, 2024 11:59 PM (ET). A submission made before Thursday, February 1, 2024 11:59 AM (ET) will be considered on time. If more than the grace period is needed to complete a quiz, students must show the proof of valid excuse.

Midterm Exam & Final Exam: Both the Midterm Exam and Final Exam are open-book and will be administered on Blackboard. Students may use any course material. However, students **MUST NOT** have any form of communication with their classmates while completing an exam.

The Midterm Exam will be made available on Blackboard on Monday, March 11, 2024 at 12:00 PM (ET) and will be due on **Sunday, March 17, 2024, 11:59 PM (ET)**. Once you start the Midterm Exam, the exam has to be completed in two hours.

The Final Exam will be made available on Blackboard on Wednesday, May 1, 2024 at 12:00 PM (ET) and will be due on **Monday, May 6, 2024, 11:59 PM (ET)**. Once you start the Final Exam, the exam has to be completed in two hours.

Make-up Exams: Make-up Midterm Exam or Final Exam will not be scheduled except for extraordinary occasions.

Term Project: Students can research on any environmental issue for the project. Focus on three aspects while doing the research: 1) define the presence of market failure, 2) propose a cost-benefit analysis, and 3) evaluate present policies and/or suggest new policies. A fully developed paper is not required. A list of short answer questions will be posted on Blackboard. Students are required to address all these questions based on their research and submit the completed document on Blackboard by **Monday, April 29, 2024, 11:59 PM (ET)**.

You may visit [NCEE Working Paper Series](#) and [Resources for the Future \(RFF\)](#) to get familiarized with topics being researched in the field of environmental economics.

Privacy:

Students must use their Mason email accounts to receive important University information, including communications related to this class. I will not respond to messages sent from or send messages to a non-Mason email address. For further information on student privacy and student rights under FERPA, please visit <https://registrar.gmu.edu/ferpa/>

Academic Integrity:

The Honor Code Statement reads: *"To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University Community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this Honor Code: Student Members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work."* More information can be found at <https://oai.gmu.edu/>

Disability Accommodation:

Disability Services at George Mason University is committed to providing equitable access to learning opportunities for all students by upholding the laws that ensure equal treatment of people with disabilities. If you are seeking accommodations for this class, please first visit <http://ds.gmu.edu/> for detailed information about the Disability Services registration process. Then please discuss your approved accommodations with me. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: ods@gmu.edu | Phone: (703) 993-2474

Covid-19 Note: Students who have a Covid-related disability should contact the Disability Services office; DS will contact faculty using standard protocols about any students who require accommodations. Faculty are not expected to create accommodations for students outside of the Disability Services official guidelines.

Diversity and Inclusion:

"George Mason University is committed to providing equal opportunity and an educational and work environment free from any discrimination on the basis of race, color, religion, national origin, sex, disability, military status (including veteran status), sexual orientation, gender identity, gender expression, age, marital status, pregnancy status or genetic information. George Mason University shall adhere to all applicable state and federal equal opportunity/affirmative action statutes and regulations." For full information, please visit <https://universitypolicy.gmu.edu/policies/non-discrimination-policy/>

Notice of mandatory reporting of sexual or interpersonal misconduct:

As a faculty member, I am designated as a "Non-Confidential Employee," and must report all disclosures of sexual assault, sexual harassment, interpersonal violence, stalking, sexual exploitation, complicity, and retaliation to Mason's Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-993-3686 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance or support measures from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu

Course Plan (Tentative)

I will inform you of any changes that have to be made.

Week of Jan 15, 2024

Module 1: Introduction to environmental economics

- Field, Chapters 1 & 2
- Fullerton, D., & Stavins, R. (1998). How economists see the environment. *Nature*, 395(6701), 433-434.

Week of Jan 22, 2024

Module 2: Basic tools of microeconomics

- Field, Chapter 3

Week of Jan 29, 2024

Module 3: Externalities and public goods

- Field, Chapter 4
- Hardin, G. (1968). The tragedy of the commons. *Science*, 162(3859), 1243-1248.
- [The Tragedy of the Commons](#) (video by Marginal Revolution University)

Week of Feb 5, 2024

Module 4: The economics of environmental quality

- Field, Chapter 5
- Trading Pollution: How Pollution Permits [Paradoxically Reduce Emissions](#) (video by Marginal Revolution University)

Week of Feb 12, 2024

Module 5: Framework of analysis

- Field, Chapter 6

Week of Feb 19, 2024

Module 6: Benefit-cost analysis: Benefits

- Field, Chapter 7

Week of Feb 26, 2024

Module 7: Benefit-cost analysis: Costs

- Field, Chapter 8

Week of Mar 4, 2024 Spring Recess

Week of Mar 11, 2024 Midterm exam

Week of Mar 18, 2024

Module 8: Criteria for evaluating environmental policies

- Field, Chapter 9

Module 9: Decentralized policies

- Field, Chapter 10
- [The Coase Theorem](#) (video by Marginal Revolution University)
- Coase, R. H. (2013). The problem of social cost. *The Journal of Law and Economics*, 56(4), 837-877.
- Demsetz, H. (1967). Toward a Theory of Property Rights. *The American Economic Review*, 57(2), 347-359.

Week of Mar 25, 2024

Module 10: Command and control strategies

- Field, Chapter 11
- Harrington, W., Morgenstern, R.D. (2007). Economic Incentives Versus Command and Control: What's the Best Approach for Solving Environmental Problems?. In Gerald R. Visgilio, Diana M. Whitelaw (eds) *Acid in the Environment*. Springer, Boston.
https://doi.org/10.1007/978-0-387-37562-5_12

Week of Apr 1, 2024

Module 11: Incentive-based strategies: Environmental charges and subsidies

- Field, Chapter 12

Week of Apr 8, 2024

Module 12: Incentive-based strategies: Market trading systems

- Field, Chapter 13

Week of Apr 14, 2024

Module 13: Environmental policies in the United States

- Field, Chapters 14-17

Week of Apr 22, 2024

Module 14: Global environmental issues

- Field, Chapters 18-21