



ECON 215: Environmental Economics

General Information:

Term: 2021 Winter Session
Instructor: Staff
Language of Instruction: English
Classroom: TBA
Office Hours: TBA
Class Sessions Per Week: 6
Total Weeks: 4
Total Class Sessions: 25
Class Session Length (minutes): 145
Credit Hours: 4

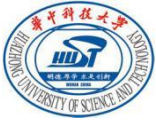
Course Description:

This course introduces students to the environmental issues from the perspective economics and provides students with economical theoretical and methodological tools to deal with environmental issues. The following modules will be covered in this course, modeling environmental problems, modeling solutions to environmental problems, analytical tools for environmental planning, the case of air, the case of water, the case of solid wastes and toxic substances, global environmental management. Through this course, the students are expected to apply some economic tools to help societies to achieve their environmental goals.

Course Objectives:

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

- Understand and become familiar with the important concepts in the field of environmental economics
- Make use of theoretical and methodological tools to deal with the issues in environmental economics



- Deal with environmental problems from an analytical perspective

Course Materials:

Callan, S. J., & Thomas, J. M. (2013). *Environmental economics and management: Theory, policy, and applications*. Cengage Learning.

Grading Scale:

A+: 98%-100%

A: 93%-97%

A-: 90%-92%

B+: 88%-89%

B: 83%-87%

B-: 80%-82%

C+: 78%-79%

C: 73%-77%

C-: 70%-72%

D+: 68%-69%

D: 63%-67%

D-: 60%-62%

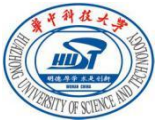
F: Below 60%

Course Assignments:

Participation

Attendance at all class sessions is required. Should you be ill or otherwise unable to attend class, you should notify the instructor in advance of your absence. If you fail to attend class on a regular basis, your final course grade will be lowered. Likewise, you should join class meetings on time. Active participation in all classroom activities is essential to success in this course. This entails a consistent willingness to play a strong role in both whole class and small group discussions by offering opinions, comments, and questions; careful reading, in advance, of assigned material; and the completion of homework assignments in a thorough and timely fashion.

Homework assignments



There will be four homework assignments, including problem-solving and short-answer questions that related to analysis of environmental economic circumstances. The specific details will be announced by the lecturer before the assignments. The students are responsible to hand in the homework assignments before the due date.

Quizzes

There will be five quizzes administered throughout the whole semester. Quizzes will always be completed in the beginning of class. The quiz problems will be similar to textbook topics and examples on slides. Some of the questions will be similar to the ones in the homework assignments. There will be no make-up quizzes. The lowest one will be dropped.

Exams:

Midterm Exam

There will be one midterm exam in this course. The midterm exam will be based on concepts covered in class. It will be in-class, close-book and non-cumulative.

Final Exam

The final will be cumulative and close-book. Note that the final will not be taken during the normal class times. Exact time and location for final will be announced later.

Course Assessment:

Participation	10%
Homework assignments	20%
Quizzes	15%
Midterm exam	20%
Final exam	35%
Total	100%

Course Schedule:

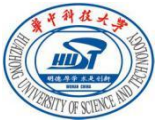
Week	Topics	Assignments
Week One	Introduction to the course The Role of Economics in Environmental Management Economics and the environment	<ul style="list-style-type: none">• Quiz 1• Homework assignment 1



	<p>Understanding environmental damage</p> <p>Identifying environmental objectives</p> <p>Modeling the Market Process</p> <p>Market models</p> <p>Market demand and supply</p> <p>Modeling Market Failure</p> <p>Environmental problems: a market failure</p> <p>Modeling a public goods market for environmental quality</p> <p>Environmental problems: externalities</p> <p>Conventional Solutions to Environmental Problems: The Command-and-Control Approach</p> <p>Standards in environmental policy</p> <p>Approaches to implementing environmental policy</p>	
Week Two	<p>Economic Solutions to Environmental Problems: The Market Approach</p> <p>Pollution charges</p> <p>Deposit/refund systems</p> <p>Pollution permit trading systems</p> <p>Environmental Risk Analysis</p> <p>Risk, risk assessment, risk management</p> <p>Assessing Benefits for Environmental Decision Making</p> <p>Environmental benefits</p> <p>Approaches to measuring environmental benefits</p> <p>Direct estimation methods under the behavioral linkage approach</p> <p>Assessing Costs for Environmental Decision Making</p> <p>Estimation methods for measuring explicit costs</p>	<ul style="list-style-type: none">• Quiz 2• Homework assignment 2• Midterm exam



<p>Week Three</p>	<p>Benefit-Cost Analysis in Environmental Decision Making Time adjustments to environmental benefits and costs Analysis on environmental benefits and costs Air Quality Defining air quality: the standard-setting process Improving air quality: controlling mobile sources and stationary sources Global air quality: policies for ozone depletion and climate change Water Quality Defining water quality: the standard-setting process Improving water quality: controlling point and non-point sources Protecting safe drinking water</p>	<ul style="list-style-type: none">• Quiz 3• Quiz 4• Homework assignment 3
<p>Week Four</p>	<p>Managing Municipal Solid Waste Characterizing the hazardous waste problem Controlling hazardous wastes (policy in the US) Characterizing municipal solid waste Policy response The market and its approaches for MSW Controlling Pesticides and Toxic Chemicals Controlling approaches and analysis to the related issues Economic Sustainable Development: International Environmental Agreements and International Trade Sustainable development as a global objective</p>	<ul style="list-style-type: none">• Quiz 5• Homework assignment 4• Final exam



	<p>Global framework for sustainable development</p> <p>International agreements to control transboundary pollution</p> <p>Sustainable Approaches: Industrial Ecology and Pollution Prevention</p> <p>Industrial ecology</p> <p>Pollution prevention</p> <p>Strategic initiatives and programs</p>	
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Academic Integrity:

Students are encouraged to study together, and to discuss lecture topics with one another, but all other work should be completed independently.

Students are expected to adhere to the standards of academic honesty and integrity that are described in the Huazhong University of Science & Technology’s *Academic Conduct Code*. Any work suspected of violating the standards of the *Academic Conduct Code* will be reported to the Dean’s Office. Penalties for violating the *Academic Conduct Code* may include dismissal from the program. All students have an individual responsibility to know and understand the provisions of the *Academic Conduct Code*.

Special Needs or Assistance:

Please contact the Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material. Our goal is to help you learn, not to penalize you for issues which mask your learning.