

Environmental Economics in the Central European Context

Lecturer: Jana Krajčová, PhD.

Contact: jana.krajcova@cerge-ei.cz

Course Description:

The aim of this course is to introduce students to some basic economic principles and theories explaining environmental issues and problems today and to explore existing policies at the national, international, and world level. Students will learn about concepts such as externalities, the tragedy of the commons, enforcement as a public good, interventionist solutions to the externality problem such as taxes and marketable pollution permits, as well as noninterventionist solutions to the externality problem such as the Coasian solution and selfregulation. Students will also review the debate over the environmental Kuznets curve. Because experimental evidence complements theoretic insights, field data and simulating models nicely, we will review some research articles that draw on the experimental methodology. This course will help students to 1) learn about and understand local environmental burdens in broader context 2) to see the environmental problems from the economic/behavioral perspective in order to understand how environmental protection is question of local policy design but at the same time a very complex international coordination game.

Course Prerequisites:

One introductory economic class or statistics class

Course Objectives/Learning Outcomes:

The students will get familiar and will be able to employ basic microeconomic theories relevant for the question of environmental protection. They will understand the importance of empirical studies to complement the textbook theories and will learn how to read and understand such studies. They will also get familiar with the local context, the role of political changes in shaping today's state of the environment as well as current policies in the region. The course also aspires to explain the role of human activity in the current status quo and the urgency of the need to coordinate the search for sustainable solutions globally.

Course Requirements:

The students need to actively participate in classes, show interest in the topic and work continuously during the semester in order to successfully complete the course. To encourage continuous work and to diversify the risks, the final grade will be assigned based on four components:

- a. **Class participation and activity (20% weight in final grade):** This is to reward the students that actively participate in class, ask or answer questions, contribute to discussions. Class attendance is mandatory for all UPCES students, with maximum one unexcused absence (medical reasons can be excused with a note from a doctor). Students who are unwell need to contact the student's affairs office as well as the instructor prior to the class. Unexcused absences are strongly discouraged. The instructor will check and record attendance and students will collect points for being present as well as for being active. Consequently, each missed class will affect your final grade.
- b. **Midterm Presentation (20% weight in final grade):** Each student (or a team - we will agree on this based on the final size of the class, a typical team size is two) will choose an environmental topic by the deadline denoted in the Course Schedule (Lecture 1) and in Moodle. By the deadline, the students need to inform the instructor about their team and its topic via email. If needed, the instructor will discuss the topic with the team. All the topics need to be approved by the instructor by the end of week 4 of the semester. This is to avoid any disappointments on either side. You can choose any environmental topic that you find interesting and relevant. Topics from environmental economics or policy design are preferred. Examples: unusual/innovative environmental policies; comparison of two policies in different countries/cities to deal with environmental problems such as e.g. transportation, waste management, renewable support schemes etc.; evaluation of real-world environmental measures based on what we covered (incentive-compatibility, efficiency, implementation); international environmental issues/coordination/cooperation; a review of interesting academic article which is somehow connected to what we discuss in class, etc. Each presentation needs to include (apart from the obvious: introduction, motivation, explanation of your topic and conclusion) 1) your own contribution such as critical evaluation of various policies and link to topics that we discuss in classes and 2) references to all the sources that you use. For further inspiration you can also check sample presentations at the course webpage. The slides that you will use should be emailed to the instructor no later than by the end of the presentations' day.

- c. **Final exam (and the worksheets; 50% weight in final grade):** At the end of the semester, we will have a cumulative final exam (i.e., everything that was discussed during the semester is relevant). It will be a 90-minute long exam and it will take place in the last week of semester during the regular class time. The questions will be selected from the worksheets: after each class the instructor will upload a worksheet for the current lecture (check the course Moodle webpage); it will be a list of questions or problems that should help you in reviewing the material discussed in class and thereby prepare for the final exam. You are not expected to submit your answers regularly. The worksheets can however be used to make up for a missed class (excused or unexcused). Students who will work on worksheets regularly will be well prepared for the final exam at the end of the semester. During the final exam, you are allowed
- d. **Quick quizzes (10% weight in final grade)** In order to motivate good distribution of workload as well as to provide feedback to your worksheet answers, we will do 4 quick quizzes during the semester – something like a quick 10-minute/1-question mintiest. The question can be selected from all previously due worksheets. The dates of the 4 quizzes will be pre-announced at the beginning of the semester.

Grading Policy:

The final grade will be computed as a weighted score of the above described components: Class participation and activity (20%), midterm presentation (20%), final exam (50%), points from 4 quick quizzes (10%). The final letter grade will be assigned in accordance with the official UPCES grading scale presented in the table below.

Few general notes and guidelines:

Use of laptops or cell phones in classes is not allowed. All the materials for classes will be uploaded before the class to the course web page – students are encouraged to print out the lecture notes and take notes on margins during the class. The printer is available and free to be used in AEP study lounge for all the AEP students. All the deadlines are given, not subject to bargaining. Plagiarism and cheating are serious academic offences and will not be tolerated. Random House Unabridged Dictionary defines plagiarism as “the unauthorized use or close imitation of the language and thoughts of another author and the representation of them as one’s own original work.” In case you have any problems, questions or you feel like you need a consultation feel free to contact your instructor at jana.krajcova@cerge-ei.cz. Keep in mind that communication with your instructor (written or personal) can help to avoid or substantially reduce problems or difficulties!

Mandatory Completion Policy

Note that all mandatory assignments and exams must be completed to the best of your ability in order for your final grade to be issued. Failure to complete a mandatory assignment or exam may result in a failing grade.

Letter Grade	Percentage	Description
A+	97-100	Excellent Work
A	93-97	Outstanding Work
A-	90-92	
B+	87-89	Good work
B	83-86	
B-	80-82	
C+	77-79	Acceptable Work
C	73-76	
C-	70-72	
D+	67-69	Work that is significantly below average
D	63-66	
D-	60-62	
F	0-59	Work that does not meet the minimum standards for passing the course

AEP Academic Integrity Policy

Plagiarism and other forms of academic dishonesty are not tolerated. The use of Artificial Intelligence (AI) for the development of knowledge and learning is encouraged at many stages of the learning process. While we value technology for educational purposes, we also value originality and the retainment of knowledge, and thus using AI for assignments and examinations, even if rephrased, is strictly prohibited and considered an academic integrity violation, unless the instructor explicitly allows for it in the context of evaluated work

AEP Non-Discrimination/Harassment Policy

The AEP program in Prague promotes a diverse learning environment where the dignity, worth, and differences of each individual are valued and respected. Discrimination and harassment, whether based on a person's race, gender, sexual orientation, color, religion, national origin, age, disability, or other legally protected characteristics, are repugnant and completely inconsistent with our objectives. Retaliation against individuals for raising good faith claims of harassment and/or discrimination is prohibited.

AEP Diversity Policy

AEP is committed to fostering an inclusive and welcoming community that values diversity in all its forms. We believe that one of the most meaningful lessons of studying abroad is learning to navigate and appreciate differences with curiosity and an open mind. While engaging across differences can sometimes be challenging or uncomfortable, these moments are essential for growth and learning. We recognize that every member of our community, even with the best intentions, may occasionally make missteps. Our commitment is to provide a supportive environment where respectful and honest dialogue helps us learn from these experiences, ensuring that every student has the opportunity to thrive and broaden their perspective.

Weekly Schedule

Week 1

AEP Introductory Lecture Series

Week 2

Introduction. Mr. Al Gore's Inconvenient truth.

After introducing the course and the topic in general, we will watch the Inconvenient truth movie, which belongs to the best introductions of the topic of global warming, the truths and misconceptions about it. We will discuss afterwards.

Week 3

Market failures - externalities, tragedy of the commons, enforcement as public good; Interventionist solutions to the externality problem – Pigouvian taxes and standards and charges.

We will introduce the mainstream microeconomic theory which fits most of the environmental problems the current society needs to deal with and we will start the most basic solutions that the theory offers; their strengths and their weaknesses. The problem of public good provision will be experienced first-hand through an in-class experiment.

Week 4

Interventionist solutions to the externality problem – Marketable pollution permits.

We will conclude the interventionist solutions with the most efficient one that theory offers. We will also discuss its practical example – the European Emissions trading system. The microeconomic theory will be complemented with in-class experiment to experience and understand the problem of externalities first-hand and also to prepare for some of the non-interventionist solutions.

Week 5

Class Topic: Non-interventionist solutions to the externality problem - Environmental labeling; Environmental Kuznets curve.

We will review the strengths and weaknesses of environmental certification. Not only theory but also some empirical evidence

Week 6

Non-interventionist solutions to the externality problem – The Coasian solution.

We will introduce an interesting theory of Coase, which can be applied in simple problems of market inefficiencies. Its beauty relies on ability of smart agents to figure out the problem and bargain to fix it. Apart from the theory itself, we will review important empirical evidence which has a say on question whether (and under which circumstances) it can work.

Week 7

Midterm presentations.

Small teams (most likely of two students) will present their research on relevant environmental policy topics

Week 8

Non-interventionist solutions to the externality problem – Voluntary programs and self-regulation.

We will revisit the issue of green certification, but now we will discuss the question of voluntary certification and environmental management systems in which firms voluntarily participate in order to build and maintain green reputation. We will look at the strengths and weaknesses of this approach and also review empirical evidence for selected green clubs.

Week 9

Environmental policy in the Czech Republic – History and current issues, part 1.

We will introduce economic and political circumstances of the Czech Republic (and the region) in the last century, when the two world wars and subsequent communist era shaped the environment and environmental policies. The ensuing need to restructure the society, its economic and political system, together with the 40 years of communism affected the state of the environment and attitudes towards the need to protect it and thereby created a lasting impact which is very specific for this region.

Week 10

Environmental policy in the Czech Republic – History and current issues, part 2.

We will review the changes in the state of the environment and specific policies that have driven them over the modern era of the Czech Republic.

Week 11

Environmental policy in the EU – History and current issues.

We will look at the common European policy over several decades, the challenges, obstacles and specifics (some connected to integration of number of postcommunist countries) that have shaped them.

Week 12

Environmental policy in the world context – History and current issues

We will discuss the international differences and challenges connected to the attempts to negotiate a coordinated approach to global climate change combat.

Week 13

Final exam

At usual time and place we will conclude the semester with written final exam, which will be a collection of questions from the worksheets.

Readings:

Textbook: Schotter, Andrew (1997), *Microeconomics. A Modern Approach*. Second Edition. Addison-Wesley. Of particular importance: Chapter 24 in that book.

Lecture notes: downloadable from Moodle (please check weekly for updates, download the current material before the class).

Articles (updated list and pdfs to download are available at Moodle):

Week 2

Required

- Andrew Schotter, *Microeconomics. A Modern Approach*, relevant sections of Chapter 24.
Hardin, *The Tragedy of the commons*.

Optional

- Levitt and List, *Field experiments in economics: The past, the present, and the future*.
Greenstone and Gayer, *Quasi-Experimental and Experimental Approaches to Environmental Economics*.

Week 3

Required

- Andrew Schotter, Microeconomics. A Modern Approach, relevant sections of Chapter 24. Plott, Externalities and Corrective Policies in Experimental Markets.

Optional

- Holt and Laury, Voluntary Provision of a Public Good.

Week 4

Required

- Andrew Schotter, Microeconomics. A Modern Approach, relevant sections of Chapter 24. Schleich et al., Incentives for energy efficiency in the EU Emissions Trading Scheme.
- Porter et al., The design, testing and implementation of Virginia's NOx allowance auction.

Optional

- Godby and Schogren, Caveat emptor Kyoto, Comparing buyer and seller liability in carbon emission trading.

Week 5

Required

- Cason and Gangadharan, Environmental labelling and incomplete consumer information in laboratory markets.
- Yandle, Vijayaraghavan, and Bhattarai, The Environmental Kuznets Curve. A Primer.

Optional

- Stern, The Rise and Fall of the Environmental Kuznets Curve.
- Hoyt, Ryan, and Houston, The Paper River: A Demonstration of Externalities and Coase's Theorem.

Week 6

Required

- Andrew Schotter, Microeconomics. A Modern Approach, relevant sections of Chapter 24.
- Coase, The problem of social cost
- Hoffman and Spitzer, The Coase Theorem: Some Experimental Tests.
- Harrison and McKee, Experimental Evaluation of the Coase Theorem.

Week 8

Required

- Potoski and Prakash, Green Clubs and Voluntary Governance: ISO 14001 and Firms' Regulatory Compliance.
- Potoski and Prakash, Covenants with Weak Swords: 14001 and Facilities' Environmental Performance,

Optional

- Evans et al., Managerial Incentives for Compliance with environmental information disclosure programs.
- Prakash and Potoski, Racing to the Bottom? Trade, Environmental Governance, and ISO 14001.

Weeks 9 and 10

Optional

- CENIA - The Environment in the Czech Republic 2017.
- CENIA - The Environment in the Czech Republic 2014.
- CENIA - The Environment in the Czech Republic 2010.
- CENIA - The Environment in the Czech Republic 1989-2004, part 1.
- CENIA - The Environment in the Czech Republic 1989-2004, part 2.
- CENIA - The Environment in the Czech Republic 1989-2004, part 3
- CENIA – website of the Czech Ministry of the Environment's information agency Environment Center of Charles University.

Week 11

Required

- Axelrod, Nuclear Power and EU Enlargement: The Case of Temelín.
- Vail, Illegal Waste Transport and the Czech Republic: An Environmental Sociological Perspective.
- Selin and VanDeveer, Broader, Deeper and Greener: European Union Environmental Politics, Policies, and Outcomes.
- Kramer, EU Enlargement and the Environment: Six Challenges.
- Kruzikova, EU Accession and Legal Change: Accomplishments and Challenges in the Czech Case.

Optional

- Jehlicka and Tickle, Environmental Implications of Eastern Enlargement: The End of Progressive EU Environmental Policy?
- Hey, EU Environmental Policies: A Short History of the Policy Strategies.
- Camin and Vandever, Enlarging EU Environments: Central and Eastern Europe from Transition to Accession.

Week 12

Required

- Kramer, Development of Environmental Policies in the United States and Europe: Convergence or Divergence?
- Bodansky, The Paris Climate Change Agreement: A New Hope?

Optional

- Muller, Copenhagen 2009 Failure or final wake-up call for our leaders.
- Stern, Action and ambition for a global deal in Copenhagen (UNEP Policy Update).