

ECON371 – Economics of the Environment

Instructor: Patrick Baylis

This version: August 11, 2022

- **When:** Thursdays, 12:30pm - 2pm (except for school holidays)
- **Where:** Buchanan A104
- **Who**
 - *Instructor:* Patrick Baylis (contact via Canvas)
 - * Office hours: By appointment, sign up via link on Canvas
 - *Teaching Assistant:* TBD (contact via Canvas)
 - * Office hours: By appointment, sign up via link on Canvas

1 Overview

Why do many major cities in have bad air quality? How much is a national park worth? Is there such a thing as too little pollution? Why are wildfires becoming more costly to fight? What should we be willing to pay to avoid two degrees of global warming? Why do poor and underprivileged communities often experience the worst air and water quality?

If these kinds of questions are interesting to you, then you're in the right place. The goal of this course is to explore relationships between the environment – the physical world in which we live – and the economy – the buying and selling of goods and services in society. Economics provides a powerful framework for understanding and correcting environmental problems and for measuring the value of both good and bad environmental quality. Since environmental qualities are rarely traded in private markets, scholars of environmental economics (like you!) are frequently forced to confront market failures and deviations from the world of perfect competition described in “Economics 101”.

In this course, we'll think about how to understand and categorize the various ways unregulated markets can fail to provide the right level of environmental quality, as well as the policy tools available to correct some of these failures. We'll also learn to use some of the techniques economists have developed to measure the value of environmental goods and bads. By the end of the course, students should have: A) a solid grounding in the economic theories that help to describe the causes of market-related environmental problems, B) an understanding of the various policy instruments that have been and could be used to correct some of these problems, and C) the ability to apply this knowledge to a range of environmental topics.

2 Details

Delivery: This course will be delivered twice a week, in person. It is possible that our mode of delivery may need to change following public health or University guidance.

Canvas: Canvas is the central location for this information about the course. I will communicate with you through announcements on Canvas, course material will be posted on Canvas, including lecture slides, recordings, and assigned readings, and all assignments will be given, graded, and returned through Canvas.

Textbook and other course materials: The textbook for the course is *Markets and the Environment* (2e) by Nathaniel O. Keohane and Sheila M. Olmstead (abbreviated KO). You may access it for free through the UBC library and a physical edition is also available for purchase online. Note that while KO is an excellent resource for a policy-oriented introduction to the concepts of the course, the content covered in our lecture notes will extend well beyond what is discussed in the book. In addition to introducing new topics that are not covered in KO, we will also be working with mathematical and graphical models to illustrate the ideas and concepts in the course. I will make other assigned material available through

Canvas. You are responsible for the content of the assigned chapters and other required material and for the content of the lectures.

Related courses: Related courses offered by the School of Economics include Economics 370 (Cost Benefit Analysis), 374 (Land Economics), 471 (Non-renewable Resources) and 472 (Renewable Resources).

Prerequisites: ECON101 (Principles of Microeconomics) and ECON102 (Principles of Macroeconomics)

Learning activities: Students will learn the course material by completing the assigned readings, attending lecture, completing problem sets, and taking the final.

Student learning outcomes

1. Work with key economic concepts (e.g., benefits, costs, efficiency, supply, demand, equilibrium, externalities, market failures, and many more...) to describe how environmental goods and bads are created.
2. Use graphical and mathematical models of markets and decision-making to describe how markets can lead to inefficient levels of environmental quality.
3. Discuss and model a range of possible policy solutions to environmental problems.
4. Articulate some of the important intellectual contributions to the field of environmental economics.
5. Extend concepts from class to discuss other kinds of social problems (environmental and otherwise) using the tools and methods learned in this course.

3 Assessments

Your grade will be determined by your participation in weekly discussion quizzes, problem sets, a midterm, and a final. In keeping with VSE grading policies, the average grade in this course will fall within the 70-80% range.

Participation: I expect you to attend class and to participate in class discussions. As such, participation will represent 5% of your grade. We will use [iClicker Cloud](#) to allow for real-time questions and feedback during lecture time. I will drop two class sessions from the computation of your overall participation score.

Problem sets: three problem sets, assigned two weeks in advance. In total they will be 35% of your grade. All problem set questions will be answered via the Canvas assignment form, and for some questions you will be required to upload proof of work.

Midterm: The midterm will be worth 20% of your grade and will be given in person during class time.

Final exam: The final will be worth 40% of your grade and will be cumulative, i.e., it will cover material from the entire course. It will be given in person during the assigned final exam time (to be determined).

Missed assignments: Assignments must be turned in electronically via Canvas by the due date and time exactly. Every day an assignment is late will reduce the grade percentage by 20 points. This happens automatically, so I recommend turning in your assignments with some time to spare.

Re-marking requests: If you believe that an assessment was incorrectly by the TA, you can appeal by notifying me via Canvas. However, to be fair, I will regrade the entire assessment, so your score may go up *or* down as a result. No appeals will be accepted more than seven days after the assessment was returned.

4 Topics

The following list of topic is provided as preview of the direction of the course. The detailed schedule will be given and updated on Canvas.

- The economy and the environment
- Benefits, costs, and efficiency
- Markets, externalities, and public goods
- Cost-benefit analysis
- Valuing environmental goods
- Introduction to environmental policy
- Environmental taxes and subsidies
- Permit trading systems
- Climate change

5 Additional notes

5.1 Statement on academic honesty

It is the policy of the VSE to report all violations of UBC's standards for academic integrity to the office of the Dean of Arts. You are personally responsible for knowing the behaviours that are considered a violation of UBC's policies for academic honesty found here: <https://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,0>. Any student who violates the rules for academic conduct on submitted work will be given an automatic grade of zero on that component of the course. Further penalties may be levied by the President's Advisory Committee on Student Discipline. Those penalties might include a notation on your transcript indicating that you have committed an academic offence, failure of the course, and/or suspension from the university. You can see more on this process, including a complete list of annual academic discipline cases, here: <https://universitycounsel.ubc.ca/homepage/guides-and-resources/discipline/>. Speak to your instructor if you have any questions regarding the standard for academic integrity at UBC.

5.2 VSE policy prohibiting the hiring of tutors

The Vancouver School of Economics expressly prohibits any student from hiring a tutor/editor to assist with any portion of written work or academic research. Violation of this rule will be treated as academic misconduct, and the student will face the same penalties as described above. If at any point you feel in need of additional writing support, please speak with your instructor and/or arrange for a writing consultation with UBC's Centre for Writing and Scholarly Communication (<https://writing.library.ubc.ca/>).

5.3 Academic concessions

Students at UBC are granted academic concessions for graded work and exams that are missed due to unexpected circumstances. There are only three grounds for academic concessions: unexpected changes in personal responsibilities; medical circumstances; and compassionate grounds. A detailed description of each can be found here: <https://students.ubc.ca/enrolment/academic-learning-resources/academic-concessions>. Situations that are expected (such as time constraints due to workload in other courses) or are predictable (such as being scheduled for paid work) are not grounds for academic concession. It is expected that requests for academic concession will be made before the due date for that graded work and/or the writing of the exam. Note that UBC policy does not allow for concessions to students who have missed work because they have registered for a course after the due date for that work. Students in the Faculty of Arts who require a concession should apply for a concession using this form: <https://students.air.arts.ubc.ca/academic-concession-form/>. Students in other Faculties should consult their Faculty website on academic concessions and consult with their instructor.

5.4 Student success

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values

respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious, spiritual and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here: <https://senate.ubc.ca/policies-resources-support-student-success/>.

5.5 Policy on sharing course materials

You will note that all the materials provided to you in this course, including this document, include the statement “©PATRICK BAYLIS, ALL RIGHTS RESERVED”. Sharing course materials in any way, either by email or by uploading them to websites, will be treated as an infringement of your instructor’s intellectual property and dealt with accordingly.

5.6 Policy on lecture recordings

As instruction at UBC is now fully in-person, the VSE no longer recommends that instructors provide lecture recordings.

5.7 Mental health

As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. I encourage you to take advantage of the many resources available at UBC to help you cope with challenges. You can find access to those resources here: <https://keeplearning.ubc.ca/self-care/>. Students looking for help with disability-related accommodations and support should speak to an advisor at the Center for Accessibility: <https://students.ubc.ca/about-student-services/centre-for-accessibility>.