

# ECON371 (Economics of the Environment)

## Course syllabus

This version: June 19, 2019

- Mon/Wed 12:30-2:00pm, Buchanan A201
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## 1 Course details

**Description:** This is an intermediate economics course focusing on the economics of environmental problems and the solutions to those problems. We will learn to use economic tools to better understand and evaluate environmental questions relating to pollution, environmental amenities, sustainable development, and climate change. The course will consist of three parts: the first will focus on categorizing environmental problems and understanding their economic causes, the second will focus on investigating possible solutions to those problems, and the third will explore a variety of topics in environmental economics.

**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)

**Canvas:** Course material will be posted on Canvas, including lecture slides and assignments. All assignments will be returned through Canvas.

**Readings:** The textbook for the course is Keohane and Olmstead *Markets and the Environment* (2007), abbreviated KO. Readings will correspond to the chapters/pages used in the second edition. I've asked the bookstore to make copies available for purchase, but in case they sell out or if you are comfortable with the electronic edition, the full text is available for free through the UBC Library. I will make other assigned and optional readings available through Canvas.

**Lectures:** I will present the bulk of the course material in lecture, and most exam material will be sourced from lectures, although information in assigned readings is also fair game. Slides will be available by midnight the day before lecture at the latest, although I reserve the right to make last-minute changes.

**Grading:** Assignments 20%, midterms 30%, final 40%, and participation 10%. Your final grade will be reported as a percentage per UBC Policy<sup>1</sup>.

**Assignments:** Take-home work will consist of four problems, assigned a week in advance. All problem set questions will be answered via the Canvas assignment form, but students will be required to upload their work as a PDF as well. You may collaborate in small (four people or fewer) groups, but each person must submit an original set of answers in his or her own words. Assignments must be turned in electronically via Canvas by the due date. Assignments up to five days late will be penalized by 30%, assignments more than five days late will be marked a zero.

**Midterms:** I will conduct two midterms and a final. You will know the dates of the midterms at least two weeks in advance. If you are unable to attend one of the midterms because of exigent circumstances, let me know *in advance* and we can discuss alternative arrangements.

**Final exam:** The final will be cumulative, i.e., it will cover material from the entire course. As soon as I know the final exam date, I will post it to Canvas.

**Participation and iClicker policies:** Your participation grade will be based on iClicker. I will make extensive use of the iClicker system in this course. 75% of the participation marks are based on iClicker usage alone, regardless of whether you answer correctly. 25% of the participation marks are based on the accuracy of iClicker answers. It is your responsibility to ensure that your iClicker is in working condition prior to attending class. I will not allow students to make up missed days or to submit a “paper iClicker”, but I will drop the two lowest iClicker grades in the course for each student. Impersonating another student on the iClicker system, or asking another student to impersonate you is considered academic misconduct.

**Re-marking requests:** If you feel that a midterm was unfairly graded, you can appeal by returning it to me with an attached note. However, to be fair, I will regrade the entire exam, so your score may go up or down as a result. No appeals accepted more than 7 days after the exam was returned.

**Accommodations:** I am happy to make any necessary accommodations for those students who require it. Please contact Access and Diversity to obtain an Academic Accommodation Letter and provide it to me within the first two weeks of the term. See UBC Policy 73<sup>2</sup> for more details.

**Academic integrity:** I expect all students to exhibit academic integrity in accordance with UBC Policy<sup>3</sup>.

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1. <http://www.calendar.ubc.ca/Vancouver/index.cfm?tree=3,42,96,0>

2. <http://www.universitycounsel.ubc.ca/files/2010/08/policy73.pdf>.

3. <http://www.calendar.ubc.ca/Vancouver/index.cfm?tree=3,286,0,0>.

## 2 Course schedule

The course is divided up into three units. The first two units form the core of the course, while the third unit is a grab bag of interesting topics. The first and second midterms will test students for comprehension on the first and second units, respectively, while the final will include material from all three. The following schedule is provided as preview of the direction of the course, but regular updates to the schedule, including changes to upcoming topics and required readings, will be posted on Canvas only.

### Unit 1: Efficiency and market failures

1. Economics of the environment
2. Economic efficiency and the environment
3. Benefit-cost analysis and environmental valuation I
4. Benefit-cost analysis and environmental valuation II
5. Review of market fundamentals
6. Market failures (externalities)
7. Market failures (public goods)
8. Market failures (tragedy of the commons)
9. Monopolies and market failures

### Unit 2: Market-based environmental policy

1. Introduction to market-based environmental policy, prescriptive regulation
2. Taxes, tax incidence, and corrective taxation
3. Cap and trade
4. The Coase Theorem: do we need to intervene at all?
5. Comparing market-based environmental policies

### Unit 3: Other topics in environmental economics

1. Fish and water economics
2. Energy efficiency
3. Economics of climate change

**Acknowledgements, errat, and copyright:** This course was designed with inspiration from courses taught by James Sallee (UC-Berkeley) and Brian Copeland (UBC). Any errors are my sole responsibility, and I will be grateful to students who report them. I am the copyright owner for course material (lectures, slides, assignments, exams) unless otherwise specified.