

Course Syllabus

ECO313H5S – Environmental Economics

Department of Economics
University of Toronto Mississauga

Winter 2023

Contact Information

Instructor: Eduardo Souza-Rodrigues
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Office hours: Wednesdays, 2 PM – 3 PM (in-person)
Course website: Quercus (<https://q.utoronto.ca>)

Contact Hours

Lectures: Wednesdays, 11 AM – 1 PM
Location: MN 1190

Teaching Assistant: Matthew Tang
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Office hours: TBD

Tutorials: Thursdays, 2 PM – 3 PM. Location IB 360

Unless otherwise noted on Quercus, lectures and tutorials will take place in person. See the UTM timetable for up-to-date location information.

Tutorials will start on January 19th, 2023.

Course Objectives and Learning Outcomes

This course provides an introduction to the field of environmental and natural resource economics. It focuses on the application of economic theory and empirical evidence to address important environmental issues, such as the management of renewable and non-renewable resources, and the different forms of environmental regulation and pollution control – including market-based instruments such as tradeable pollution rights and carbon taxation.

The goal is to take advantage of the powerful framework that Economics provides to help us 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. 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.

Course Materials

Required Textbook:

Markets and the Environment, by Nathaniel O. Keohane and Sheila M. Olmstead, Island Press, Washington DC, 2nd Edition, 2016.

Helpful Readings:

- *Environmental and Natural Resource Economics*, by Tom Tietenberg and Lynne Lewis, Addison Wesley, 11th Edition, 2018. (Excellent introductory book, but more extensive/detailed than we need.)
- *Environmental Economics*, by Charles Kolstad, Oxford University Press, 2nd Edition, 2011. (Excellent but more advanced undergrad-level textbook.)
- *A Course in Environmental Economics: Theory, Policy and Practice*, by Daniel J. Phaneuf and Till Requate, Cambridge: Cambridge University Press, 2017. (More advanced grad-level textbook.)
- *Cartoon Introduction to Climate Change*, by Yoram Bauman and Grady Klein, Island Press, 2014 (Interesting easy-to-read introduction to the science and economics of climate-change, in case you do not already have a good background understanding of the topic.)
- *Climate Change: A Very Short Introduction*, by Mark Maslin, Oxford University Press, 4th Edition, 2021. (Great short introduction to the science of climate change.)
- *The Climate Casino: Risk, Uncertainty, and Economics for a Warming World*, by William D. Nordhaus, Yale University Press, 2013. (Overview of the economics of climate change to a general audience.)

Additional Helpful Sources – Blogs:

- Energy Institute Blog, Berkeley University: <https://energyathaas.wordpress.com/>
- Energy Policy Institute at the University of Chicago (EPIC), Opinion and Analyses: <https://epic.uchicago.edu/insights/opinion-analyses/>
- Prof. Robert Stavins' Blog, Harvard University: <https://www.robertstavinsblog.org/>

Additional Helpful Sources – Podcasts:

- Environmental Insights: <https://soundcloud.com/environmentalinsights>
- Energy Policy Institute at the University of Chicago (EPIC), Podcasts: <https://epic.uchicago.edu/insights/podcasts/>
- Freakonomics (occasional podcasts about environmental problems): <https://freakonomics.com/podcasts/>

Course Outline

The following is the planned course outline (subject to minor changes). Students are recommended to preview the corresponding chapters before lectures.

| Week | Lecture | Chapters |
|------|--|--|
| 1 | Introduction | Ch 1, 2 |
| 2 | Economic Efficiency, Benefits and Costs | Ch 3 |
| 3 | Efficiency of Markets | Ch 4 |
| 4 | Quiz 1 | |
| 5 | Market Failures in the Environmental Realm | Ch 5 |
| 6 | Market-Based Environmental Policies | Ch 8 |
| 7 | Market-Based Instruments in Practice | Ch 9 (except pp 184-189), Ch 10 (except pp 207-214) |
| 8 | Quiz 2 | |
| 9 | Non-Renewable Resources | Ch 6 |
| 10 | Renewable Resources (Forest, Fisheries) | Ch 7 Ch 9 (only pp 184-189), Ch 10 (only pp 207-214) |
| 11 | Sustainability, Economic Growth – Conclusion | Ch 11, 12 |
| 12 | Quiz 3 | |

Evaluation

The final score is based on two parts: graded quizzes and a term paper. The weights are shown below. There is no final exam.

Quizzes (60%)

In order to provide regular assessment and to provide a simple commitment device, there will be a quiz during the lecture hours every fourth week (indicated in the course outline above). These quizzes are aimed to be simple and will be closely based on the textbook, the lectures, and practice problems provided. Each quiz will be written for an hour's duration but you will have up to the length of the lecture to complete them (110 minutes). The dates are given below.

- Quiz 1 (Feb 1, 2023): 20%
- Quiz 2 (Mar 8, 2023): 20%
- Quiz 3 (April 5, 2023): 20%

All answers must be legible; if the grader cannot read your answers, you will receive no credit. In the front page, put your registered name and student number.

Term Paper (40%)

We will have one term paper worth 40% of the final grade. In the term paper, you will be asked to analyze a real world environmental issue.

Your paper will be evaluated on the merits of the analysis, together with the clarity and depth of the reasoning you provide. The ideal paper will combine insights from theory we discuss in class with careful consideration of the practical issues present in the environmental problem under study. There is no length requirement; take whatever space you need, while being careful to write concisely. As a very rough guide, I expect 1500-2000 words to be typical, although shorter or longer papers are perfectly acceptable. However, unnecessary length due to repetition or irrelevant digressions will be penalized.

Working on the term paper in groups is not permitted. To avoid suspicion, I strongly recommend keeping any ideas to yourself. The date is given below:

- Term Paper (deadline 11:59 pm on April 14, 2023): 40%

The topic(s) for the term paper will be announced in the first half of March.

Submission of Course Work

Quizzes

Late return of the quizzes will be subject to a late penalty of 1% per minute of the total marks for the quiz.

Term Paper

It is students' responsibility to ensure that their online submission of the term paper is submitted successfully by the due date. Accommodations will not be made for unsuccessful submissions due to, but not limited to, i) the system timing out, ii) submitting the incorrect or corrupted document(s), iii) problems with the internet connection, iv) computer problems, etc. Please submit the term paper well before the deadline to avoid technical problems.

Late term papers will be penalized at a rate of 20 percentage points each day (incurred at midnight). Term papers submitted more than five calendar days beyond the due date will be assigned a grade of zero. This penalty will not be waived, nor will individual extensions be granted, even with a medical note. I will provide detailed instructions for paper submission.

Missed Term Work

Quizzes are an important component of the course. Each student can miss at most one quiz. The weight from the missed quiz will be moved to the term paper. In other words, if a student misses a quiz, the paper would then constitute 60% of the course grade. The grade from any more missed quizzes will be forfeit.

Students who miss a quiz because of circumstances beyond their control (e.g. illness or an accident) can request that the Department grant them special consideration. The following steps must be completed in order to be considered for academic accommodation for any missed quiz/test/assignment.

1. Your absence must be declared on ACORN on the day of your absence (or by the day after, at the latest). Consult the Office of the Registrar should your absence be lengthy or affect multiple courses.
2. You must notify your professor by e-mail on the day of your absence (or by the day after, at the latest).
3. Complete an online [Special Consideration Request](#) within one week of the missed test / due date. The University is temporarily suspending the need for a doctor's note or medical certificate for any absence from academic participation. However, this policy may change at any point during the course.

The request that you submit represents an appeal from you, requesting the opportunity to account for that portion of your grade in some other manner. If the request is not received, or if the request is deemed unacceptable, you will receive a grade of zero for the item you missed. If the request is granted – that is, your reason for missing the item is considered acceptable by the professor – then will get credit for the missed quiz as specified above.

Note that it is your responsibility to ensure that your email account is working. Claims that a Departmental decision was not received will NOT be considered as a reason for further consideration.

Also, note that holidays and pre-purchased plane tickets, family plans, your friend's wedding, lack of preparation, or too many other tests/assignments are not acceptable excuses for missing a quiz.

Students **CANNOT** petition to re-write a quiz/test once it has begun. If you are feeling ill, please do not start the test, seek medical attention immediately, and the policy on Missed Term Work will apply.

Regrade Request

The quizzes are graded by the teaching assistant. If a student would like to have their test re-graded, I will accept applications for re-grades if it:

1. Is made IN WRITING and given to me along with your ENTIRE assessment,
2. Clearly specifies which questions were improperly marked and explains why,
3. Is submitted within **one month** of the test being returned to you.

Note that the entire quiz will be re-graded, not just the disputed parts. Your grade can go up, down, or remain unchanged. These conditions do not apply to clerical errors such as the incorrect adding up of your score or questions that has mistakenly been missed and not been graded. If a clerical mistake occurs, contact the teaching assistant as soon as possible and she/he will adjust your score.

Privacy and Use of Course Materials

Notice of video recording and sharing (Download and re-use prohibited)

This course, including your participation, will be recorded on video and will be available to students in the course for viewing remotely and after each session. Course videos and materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation, and are protected by copyright. Do not download, copy, or share any course or student materials or videos without the explicit permission of the instructor. For questions about recording and use of videos in which you appear please contact your instructor.

Note: notwithstanding the above paragraph, it is up to the discretion of the instructor whether to save or post any individual lecture or tutorial; some, or all, lectures or tutorials might not be saved or recorded. Students may not save or post any recording of any lecture or tutorial.

Technology

Plagiarism Detection Tool

Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (<https://uoft.me/pdt-faq>).

If students prefer not to submit their essays to the plagiarism detection tool, they must meet with the professor before the start of reading week to discuss alternative arrangements. This meeting can take place in office hours; if a student cannot meet during office hours, an alternate meeting time can be set up via email (which must be received at least two weeks before the start of reading week).

Zoom:

Some lectures, tutorials, and office hours may be delivered via Zoom or other similar software. If this happens, links will be provided on the Quercus course website. Unless otherwise noted, office hours will take place on Zoom or other similar software.

Students must create an official UTM Zoom account using their UTORid and password at <https://utoronto.zoom.us>. Logging in with an unofficial account will leave you stranded in the waiting room and unable to attend lectures / tutorials / office hours.

Supplement

The [Supplement to Course Syllabi \(dated August 9, 2022\)](#) of UTM's Department of Economics should be understood to be an integral part of this syllabus. It describes

- time zone information;
- information regarding prerequisites and exclusions;

- your responsibility to adhere to the [Code of Student Conduct](#);
- your responsibility to adhere to the [Code of Behaviour on Academic Matters](#);
- expectations regarding academic integrity, including examples of violations;
- technology requirements for online learning;
- your responsibility to avoid course conflicts;
- your responsibility to honour the copyright of course materials;
- your right to receive accommodations for religious observances;
- the equity statement for this course;
- your academic rights;
- some resources that are available to students, including [Accessibility Services](#).