

# ECON\*4930 - Environmental Economics

## Fall 2024 Course Outline

**Section: 01**

**Credits: 0.50**

## Calendar Description

This course is an advanced treatment of the interrelationship between economic activities and the state of the natural environment from an economics perspective.

**Prerequisite(s):** 14.50 credits including ECON\*2310, ECON\*2770

**Department(s):** Department of Economics and Finance

## Course Description

This course looks at the impact of economic activity on environmental quality, and the economic analysis of environmental policy. We will cover the concept of externalities, growth and the environment, the optimal control of pollution, policy design and analysis, and specific issues like air pollution and climate change.

We will develop and apply systematic microeconomic tools to help us think through environmental issues with a focus on the design and analysis of policies to manage the environmental impact of economics activities. Environmental policy has a large impact on every aspect of society, and plays an important role in domestic and international political affairs. The ability to understand and analyse these issues will be of benefit whether you plan to work in the public or private sector. This course also provides a basis for those intending to do academic research and graduate studies in the area of environmental economics.

Assignments will focus on giving you practice at integrating the theory into real world debates and policy discussions. The exams will be more focused on testing your grasp of the theory. We will set aside some class time to take up chapter exercises, but it will be important for you to take the time to work on the material yourself in order to be prepared for the exams.

## Lecture Schedule

## Instructor Information

Ross McKittrick

## Textbooks

Group	Title	Author	ISBN
Required	Economic Analysis of Environmental Policy	Ross McKittrick	978-1-4426-1070-5

## Learning Resources

### Course Resources

Please consult the CourseLink page for additional readings and other information.

### Campus Resources

If you are concerned about any aspect of your academic program: Make an appointment with a Program Counsellor (<https://www.uoguelph.ca/uaic/programcounsellors/>) in your degree program. If you are struggling to succeed academically: There are numerous academic resources offered by the

Learning Commons (<https://www.lib.uoguelph.ca/using-library/spaces/learning-commons/>) including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills.

## Course Level Learning Outcomes

Upon successfully completing this course, you will have acquired the following skills:

1. Written Communication: Ability to write about issues relating to the course based on evidence and clear analysis.
2. Real-World Knowledge: Historical information about patterns of economic development, pollution and environmental change and human welfare
3. Real world problem-solving: Ability to obtain relevant data, apply economic principles and construct an argument for valid conclusions.
4. Computing skills: Ability to use data and spreadsheet software to compute valid results and presentable graphics

## Academic Integrity

### WARNING ABOUT CHEATING

This course outline contains a link to the University's policy statement on Academic Integrity. I will assume you have read it and that by enrolling in this course you agree to abide by it. My assignments and tests are structured to detect cheating, which includes using materials obtained from CourseHero or other such sharing tools. You are required to do the course work yourself. Every instance of plagiarism or other types of cheating, no matter how minor, will be referred to the Dean's office. I catch students every year. The consequences can be significant and long lasting. Govern yourself accordingly.

## Schedule of Topics and Assignments

Day	Date	Topic	Activities	Due
Thu	9/5	Meeting and introduction		
Tue	9/10	Historical survey: environment and economy	See Courselink	
Thu	9/12	Issues, instruments and institutions	Ch. 1.1-1.4	
Tue	9/17	Economic growth and the environment	Ch 1.5	
Thu	9/19	Valuation of the environment	Ch 2.1-2.4	
Tue	9/24	Discounting, inequality and risk	Ch 2.5-2.9	
Thu	9/26	The Marginal Abatement Cost Curve	Ch 3	
Tue	10/1	Optimal emissions	Ch 4.1-4.4	
Thu	10/3	In-class review exercises	See Courselink	
Tue	10/8	Dynamic efficiency; Pigovian taxes	Ch 4.6-4.7	
Thu	10/10	Incentives and information	Ch 5.1	
Tue	10/15	Fall Study Break		
Thu	10/17	Midterm exam		
Tue	10/22	Instrument choice under uncertainty	Ch 5.2	
Thu	10/24	Standards	Ch 6.1-6.2	
Tue	10/29	Monitoring and enforcement	Ch 6.3	
Thu	10/31	In-class exercises	See courselink	
Tue	11/5	Tradable permits	Ch 7	
Thu	11/7	Emission taxes I	Ch 8	
Tue	11/12	Emission taxes II	See courselink	
Thu	11/14	Policy targeting Midterm Exam	See courselink	
Tue	11/19	Climate change and carbon taxes I	See courselink	
Thu	11/21	Climate change and carbon taxes	See courselink	
Tue	11/26	Guest lecture		
Thu	11/28	Review		

## Assessment Breakdown

Description	Weighting (%)	Due Date
Assignment #1	15%	Week 4 (Oct 3)
Assignment #2	25%	Week 12 (Nov 26)
Midterm	20%	Week 6 (Oct 17)
Final exam	40%	TBA

## Final Exam

Date: Dec 4

Time: Wed 8:30am-10:30am

Location: TBA *Please see Web Advisor closer to the date of scheduled final for location.*

To understand rules and regulations regarding Examinations students are encouraged to read Student's Responsibilities (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/examinations/>)

If the student is unable to meet the final exam requirements due to medical, psychological or compassionate circumstances they are encouraged to review Student's Responsibilities in the Academic Consideration, Appeals and Petitions (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>) section of the Academic Calendar.

## Last Day to Drop Course

The final day to drop Fall 2024 courses without academic penalty is the last day of classes: November 29

After this date, a mark will be recorded, whether course work is completed or not (a zero is assigned for missed tests/assignments). This mark will show on the student's transcript and will be calculated into their average.

## Course Standard Statements

### Course Technology Policy

The classroom is an electronics-free zone. You may **not** use laptops, tablets, iPads, smartphones or any other electronic device. If you have an electronic device with you when you arrive you need to silence it and/or put it into airplane mode. I realize that some of you like to take notes on your laptops, but pen and paper will have to do. If you have an SAS accommodation allowing you to take notes on an electronic device please see me to arrange permission.

## Standard Statements for Undergraduate Courses

### Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-misconduct/>) is outlined in the Undergraduate Calendar.

## Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability. Use of the SAS Exam Centre requires students to make a booking at least 10 days in advance, and no later than the first business day in November, March or July as appropriate for the semester. Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time. For students at the Guelph campus, information can be found on the SAS website. (<https://www.uoguelph.ca/sas/>)

## Accommodation of Religious Obligations

If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor within two weeks of the start of the semester to make alternate arrangements.

See the Academic calendar for information on regulations and procedures for Academic Accommodations of Religious Obligations (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-accommodation-religious-obligations/>).

## Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

## Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all undergraduate students except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in the Undergraduate Calendar - Dropping Courses (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/dropping-courses/>).

## Email Communication

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly. e-mail is the official route of communication between the University and its students.

## Health and Wellbeing

The University of Guelph provides a wide range of health and wellbeing services at the Vaccarino Centre for Student Wellness (<https://wellness.uoguelph.ca/>). If you are concerned about your mental health and not sure where to start, connect with a Student Wellness Navigator (<https://wellness.uoguelph.ca/navigators/>) who can help develop a plan to manage and support your mental health or check out our mental wellbeing resources (<https://wellness.uoguelph.ca/shine-this-year/>). The Student Wellness team are here to help and welcome the opportunity to connect with you.

## Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g., final exam or major assignment).

## Recording of Materials

Presentations that are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

## Resources

The Academic Calendars (<http://www.uoguelph.ca/registrar/calendars/?index>) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

## When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the Undergraduate Calendar for information

on regulations and procedures for Academic Consideration. (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>)