

## ECON 2J03 – C01: Environmental Economics

### Spring 2024

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**Office Hours:** I am available by email and will hold office hours on Zoom by appointment

**Lecture:** Online (asynchronous)

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## **COURSE DESCRIPTION**

This course is the study of how to use the principles of economics to manage environmental resources. Environmental economics builds mostly on the foundations of microeconomic analysis. It focuses mainly on how and why people make decisions that have impacts on the environment. It is also concerned with how we can change economic institutions and policies to bring these environmental consequences more into balance with human desires and the needs of the nature.

The course is divided into the following sections:

- **Introduction**, which provides an overview of key issues addressed in environmental economics.
- **Analytical Tools**, which covers concepts such as willingness to pay, efficiency and equity, social welfare, market failure, externalities and public goods.
- **Environmental Analysis**, which focuses on cost-benefit analysis and methods for estimating costs and benefits.
- **Environmental Policy Analysis**, which looks at criteria for evaluating environmental policies including property rights, standards, taxes and subsidies, transferable permits.

## **PREREQUISITES**

ECON 1B03 (or ARTSSCI 2E03)

## **COURSE OBJECTIVES**

By the end of the course, students should be able to:

- Explain how economics can be used to address important environmental problems.
- Demonstrate how the economy and natural environment are related and how to reduce wastes for sustaining natural resources.
- Examine how market failure happens due to external costs and benefits when we use environmental resources in the economy.

- Examine techniques for quantifying the benefits and costs of improving environmental quality.
- Provides measures for assessing environmental policies.

## **CLASS FORMAT**

This course will be delivered virtually in an asynchronous format. The lecture content will be available to you in slides/videos/reading list through Avenue to Learn (A2L) website. Each week you will use a “weekly schedule” to keep you on task as you read the slides or textbooks, watch instructor videos, and complete practice questions.

## **COURSE MATERIALS AND TEXTS**

- Field, Barry C. and Field, Martha K., *Environmental Economics an Introduction* 8th edition. (International Edition) McGraw-Hill Ryerson.
- Field, Barry C. and Olewiler, N.D., *Environmental Economics*; fourth Canadian edition (2015) McGrawHill Ryerson.

The course materials will be a blend of the two textbooks. You can purchase the first textbook from the bookstore. The second textbook is the Canadian edition of the first one and complements it. You may be able to find used third and fourth Canadian edition textbook. The textbooks are optional.

## **AVENUE TO LEARN**

Course materials (e.g. course outline, lecture slides, weekly schedules, lecture videos, announcements, discussion board, etc.) will be posted on the Avenue to Learn (A2L) website <http://avenue.mcmaster.ca>. It is your responsibility to check your A2L account regularly (at least once a day) for announcements or other material posted on the course site.

## **COURSE EVALUATION – OVERVIEW**

1. Participation – 5%
2. Quizzes (2) – 8% (4% each)
3. Assignments (2) – 12% (6% each)
4. Midterm – 30%
5. Final Exam – 45%

## **COURSE EVALUATION – DETAILS**

### ***Participation (5%) – Avenue***

You should participate in online discussions by responding to the topics that will be posted on Avenue throughout the term. Detailed instructions will be provided on Avenue.

### ***Online Quizzes (8%) – Avenue***

- Online quizzes are scheduled during specific weeks as indicated below. For those weeks, quizzes will be available on Friday from 9:00 AM until 11:59 PM (EDT). You may submit the quiz anytime in the timeframe.

- Each quiz consists of about 25 multiple-choice questions and must be completed in 30 minutes.
- Detailed instructions will be provided on Avenue.

Quiz 1: available May 17, Friday – 9 am until 11:59 pm (EDT)

Quiz 2: available June 14, Friday – 9 am until 11:59 pm (EDT)

### **Assignments (12%) – Avenue**

- Assignments can be submitted individually or in a group. When submitted in a group, all the group members will receive the same mark.
- Each assignment will be posted on ASSIGNMENT tab on Avenue at least 1 week prior to the due dates indicated below
- Further instructions regarding group members and submissions will be provided on Avenue.

Assignment 1: Due May 26, by 11:59 pm (EDT)

Assignment 2: Due June 9, by 11:59 pm (EDT)

### **Midterm exam (30%) – Avenue**

The midterm exam will be available on May 31, Friday, from 9 am until June 1, Sunday, 11:59 pm (EDT). Further details will be posted on Avenue.

### **Final Exam (45%) – Avenue**

The final exam is cumulative and will be available on June 21, Friday, from 9 am until June 23, Sunday, 11:59 pm (EDT). Further details will be posted on Avenue.

## **COURSE POLICIES**

### **Grades**

Grades will be based on the McMaster University grading scale:

MARK	GRADE
90-100	A+
85-90	A
80-84	A-
77-79	B+
73-76	B
70-72	B-
67-69	C+
63-66	C
60-62	C-
57-59	D+
53-56	D
50-52	D-
0-49	F

### ***Grade Adjustment Techniques***

I reserve the right to adjust marks upwards in order to standardize the median score. Marks will never be adjusted down for this procedure.

### ***Absences, Missed Work, Illness (MSAF)***

McMaster Student Absence Form (MSAF): In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar “Requests for Relief for Missed Academic Term Work”.

For a missed assignment, quiz, or midterm exam, students should submit an MSAF, in which case the weight of the missed assessment will be transferred to the final exam.

### ***Where to Get Help***

You can ask your questions by email or via Zoom by appointment.

### ***Faculty of Social Sciences E-mail Communication Policy***

Effective September 1, 2010, it is the policy of the Faculty of Social Sciences that all e-mail communication sent from students to instructors (including TAs), and from students to staff, must originate from the student's own McMaster University e-mail account. This policy protects confidentiality and confirms the identity of the student. It is the student's responsibility to ensure that communication is sent to the university from a McMaster account. If an instructor becomes aware that a communication has come from an alternate address, the instructor may not reply at his or her discretion.

## **UNIVERSITY POLICIES**

### ***ACADEMIC INTEGRITY***

You are expected to exhibit honesty and use ethical behavior in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behavior can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the [Academic Integrity Policy](#).

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one's own or for which credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations.

### ***AUTHENTICITY / PLAGIARISM DETECTION***

***Some courses may*** use a web-based service (Turnitin.com) to reveal authenticity and

ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly to Turnitin.com or via an online learning platform (e.g. A2L, etc.) using plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the Instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software. **All submitted work is subject to normal verification that standards of academic integrity have been upheld** (e.g., on-line search, other software, etc.). For more details about McMaster's use of Turnitin.com please go to [www.mcmaster.ca/academicintegrity](http://www.mcmaster.ca/academicintegrity).

### **COURSES WITH AN ON-LINE ELEMENT**

**Some courses may** use on-line elements (e.g. e-mail, Avenue to Learn (A2L), LearnLink, web pages, capa, Moodle, ThinkingCap, etc.). Students should be aware that, when they access the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in a course that uses on-line elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

### **ONLINE PROCTORING**

**Some courses may** use online proctoring software for tests and exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins.

### **CONDUCT EXPECTATIONS**

As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the [Code of Student Rights & Responsibilities](#) (the "Code"). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, **whether in person or online**.

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students' access to these platforms.

### **ACADEMIC ACCOMMODATION OF STUDENTS WITH DISABILITIES**

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements. Academic accommodations must be arranged before classes or academic work begins, and for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail [sas@mcmaster.ca](mailto:sas@mcmaster.ca). For further

information, consult McMaster University's Policy for [Academic Accommodation of Students with Disabilities.](#)

### **ACADEMIC ACCOMMODATION FOR RELIGIOUS, INDIGENOUS OR SPIRITUAL OBSERVANCES (RISO)**

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the [RISO](#) policy. Students should submit their request to their Faculty Office **normally within 10 working days** of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

### **COPYRIGHT AND RECORDING**

Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, **including lectures** by University instructors

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

### **GENERATIVE AI: SOME USE PERMITTED**

Students may use generative AI for editing/translating their work throughout the course so long as the use of generative AI is referenced and cited following citation instructions given in the syllabus. Use of generative AI outside the stated use of editing/translating without citation will constitute academic dishonesty. It is the student's responsibility to be clear on the limitations for use and to be clear on the expectations for citation and reference and to do so appropriately.

### **COURSE MODIFICATION**

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check his/her McMaster email and course websites weekly during the term and to note any changes.

## **WEEKLY COURSE SCHEDULE (TENTATIVE) AND/OR IMPORTANT DATES**

### **Week 1 (May 6 – 12)**

Topic: What is Environmental Economics?

Topic: The Economy and the Environment

### **Week 2 (May 13 – 19)**

Topic: Benefits and Costs, Supply and Demand

Topic: Markets, Externalities, and Public Goods

#### **Quiz 1 (scheduled on May 17)**

#### **Discussion 1- Introduction (due on May 19)**

### **Week 3 (May 20 – 26)**

Topic: The Economics of Environmental Quality

Topic: Frameworks of Analysis

#### **Assignment 1 (due on May 26)**

### **Week 4 (May 27 – June 2)**

Topic: Benefit-Cost Analysis: Benefits

Topic: Benefit-Cost Analysis: Costs

#### **Midterm (scheduled on May 31)**

### **Week 5 (June 3 – 9)**

Topic: Criteria for Evaluating Environmental policies

Topic: Liability Laws and Property Rights

#### **Assignment 2 (due on June 9)**

### **Week 6 (June 10 – 16)**

Topic: Standards

Topic: Emission Taxes and Subsidies

#### **Quiz 2 (scheduled on June 14)**

#### **Discussion 2- Critical Reflection (due on June 14)**

### **Week 7 (June 17 – 21)**

Topic: Emission Permits

Topic: Compliance Costs and Uncertainty

#### **Final Exam (scheduled on June 21)**