ST. FRANCIS XAVIER UNIVERSITY
Department of Economics

ECONOMICS 281: Environmental Economics

Instructor: Dr. Patrick Withey Fall 2023

Lectures: **2:30 – 3:45 PM Monday and 4:00-5:15 PM Thursday MULH 4030**
Office: MULH 3067
Office Hours: Tuesday 11:30-1:30, Thurs 10:00-12:00.
All office hours will be in person in my office.
Web page: Class info will be available through Moodle: http://sites.stfx.ca/itservices/
Email: pwithey@stfx.ca

Course Description (Calendar):

As an introduction to the relationship between human economic activity and the environment, this course explores the economic concepts used to analyze the causes, consequences, and possible solutions to local and global environmental issues. Topics include: market failure; property rights; externalities; public goods; environmental valuation; environmental policies dealing with pollution and global issues such as global warming, ozone depletion, biodiversity, and sustainability.

Course Goals:

The main goal of this course is to introduce students to environmental issues and to demonstrate how economic theory and analysis can be used to understand the relationship between the economy and the environment, as well as to help devise efficient policy tools to manage the environment. Students will also become familiar with Canadian environmental policies.

Textbook:

Optional textbook: Environmental Economics, 4th Canadian Edition, 2015. Barry Field and Nancy Olewiler. McGraw-Hill Ryerson Ltd.

I have used this book in the past. Some students have found it useful, but the course material diverges quite a bit. You can buy it online or find a used copy from previous years.

I will also put a copy of this text on reserve.

Prerequisites: Econ 101

Grading:

Your final grade will be determined as follows:

Midterms	40%	Thursday, Oct 5, 2023 and Thursday, Nov 20, 2023
Assignments	20%	Tentative due dates: Sept 28, November 2, December 5
Final examination	40%	TBA

You will take two midterm tests during the term, which will be based on material from lectures and any supplemental reading that may be assigned. No make-up exams. You must also complete three assignments, which will give you an indication of what to expect on the exams. Assignments will be given out one week in advance of the due date. You must write the final exam in order to pass the course. The final examination will be set by the examinations office and covers material from the entire course. All dates above are tentative and subject to change.

SYLLABUS

The following topics and readings are tentative and changes may be made as the course progresses. Chapter references refer to Field and Olewiler. I follow the general structure of that text, although the material is quite different.

1. Introduction to Environmental Economics Ch.'s 1 and 2

2. Modelling Environmental Externalities and Optimal Pollution Ch. 3 -5 (Theory)
   - BRIEF Review: Supply and demand, and equilibrium (Ch.3)
   - Markets and efficiency, and externalities (Ch.4)
   - Economic-environmental modelling: optimal pollution levels (Ch.5)

3. Environmental Policy Analysis Ch.'s 9-13
   - Discussion on types of environmental policies (my notes)
   - Criteria for evaluation of environmental policy (Ch. 9)
   - Analysis of policy instruments: property rights, standards, taxes, subsidies and permits (Ch.'s 10-13)
     - Discussion of current carbon tax policy in NS and Canada

4. Climate change policy topics for discussion (my notes and articles to be assigned)
   - Applied economic modelling of climate change and optimal policy (DICE model)
   - Pathway to Net Zero: Economic implications
   - Electricity generation, coal phase out renewable energy: opportunities and challenges in Atlantic Canada

5. Benefit-Cost Analysis Ch.'s 6-8
    - Discussion on valuation and ecosystem services, including biodiversity

Policies:

Approach to the course and class participation: Students are expected to attend all classes and be present in class on time. If you miss more than a week of class without explanation I am required to report your absence to the Dean's office. The course will be lecture based. Students are responsible for all material presented in class (e.g. diagrams, notes, etc.). Lectures will be mostly theoretical, but we will introduce real world examples and examine real world environmental policies, and the concepts and theory introduced in class will be reinforced through assignments throughout the term. The work you do outside of class will go a long way in determining your outcome for the course.

Travel Plans: Students are advised not to make travel plans until after the examination timetable has been finalized. Students who wish to finalize their travel plans at an earlier date should book flights that depart after the end of the examination period. *There will be no special accommodation if travel plans conflict with the examination*.

Drop Date (set by the registrar): Students may drop a course, online in Banner, on or before November 1, 2023.

Equitable Learning: Everyone learns more effectively in a respectful, safe, and equitable learning environment, free from discrimination and harassment. I invite you to work with me to create a classroom space − both real and virtual − that fosters and promotes values of human dignity, equity, non-discrimination, and respect for diversity

Copyright: The course notes and exams are designed for use in this course, and these materials are the intellectual property of the instructor unless otherwise stated. Unless a users right in Canada's Copyright Act covers the particular use, you may not publish, post on an Internet site, sell, or otherwise distribute this work without the instructor's express permission. Failure to abide by these restrictions may constitute grounds for academic misconduct.