

ST. FRANCIS XAVIER UNIVERSITY  
Department of Economics

ECONOMICS 281: Environmental Economics

**Instructor:** Patrick Withey

Fall 2012

**Lectures:** 2:15 AM–3:30 PM Monday and Wednesday  
NH 248

Office: Nicholson Tower 504

Office Hours: Monday 11:00 AM- 1:00 PM; Tuesday 10:00 AM -1:00 PM  
Wednesday 12:00 PM- 1:00 PM or by appointment

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**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 valuations; 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 and to help solve environmental problems. Students will also become familiar with Canadian environmental policies.

**Required Textbook:**

Environmental Economics, 3<sup>rd</sup> Canadian Edition, 2011. Barry Field and Nancy Olewiler. McGraw-Hill Ryerson Ltd.

**Optional Textbook (on reserve):**

Environmental Economics and Policy, Canadian Edition, 2009. Tietenberg, T., Wilman, E. and Tracey, P. Pearson Publishing.

Note: The course will primarily follow Field and Olewiler, but I will also assign optional readings for each topic, as noted below.

**Prerequisites:** Econ 101

**Grading:**

Your final grade will be determined as follows:

Midterm	25%	Monday, October 22, 2012
Assignments	25%	Due September 26, October 17, November 7 and November 21
Final examination	<u>50%</u>	TBA

You will take one midterm test during the term, which will be based on material from lectures, textbook and any supplemental reading that may be assigned. You must also complete four 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.

**SYLLABUS**

The following topics and readings are tentative and changes may be made as the course progresses.

1. Introduction to Environmental Economics
  - What is Environmental Economics?
  - Relationship between environment and the economy
  - Required reading: Field and Olewiler Ch.'s 1 and 2
  - Optional reading: Fullerton, D. and R. Stavins (1998). How Economists See the Environment. *Nature* (395:1998)
2. Analytic tools
  - Demand, willingness to pay and marginal benefit
  - Required reading: Field and Olewiler Ch. 3
  
  - Markets and economic efficiency
  - Market failures, externalities and private vs. social costs and benefits
  - Required reading: Field and Olewiler Ch. 4
  
  - Economic-environmental modeling: optimal pollution levels
  - Required reading: Field and Olewiler Ch. 5
3. Benefit-Cost Analysis
  - Measuring environmental market and non-market costs and benefits
  - Required reading: Field and Olewiler Ch.'s 6-8
  - Optional readings: (1) Tietenberg et al Ch. 3
  - (2) Hanemann, W.M (1994). Valuing the Environment through Contingent Valuation. *Journal of Economic Perspectives* 8(4).

4. Environmental policy analysis
  - Criteria for evaluation environmental policy
  - Required reading: Field and Olewiler Ch. 9
  - Property rights
  - Required reading: Field and Olewiler Ch. 10
  - Optional readings: Coase, R. (1960) "The Problem of Social Cost" *Journal of Law and Economics* (Oct 1960).
  - Analysis of policy instruments: standards, taxes, subsidies and permits
  - Required reading: Field and Olewiler Ch.'s 11-13
5. Environmental policy in practice in Canada
  - Environmental policy and institutions in Canada
  - Water-pollution-control policy
  - Air-pollution-control policy
  - Policy on toxic and hazardous substances
  - Recycling and land use
  - Required reading: Field and Olewiler Ch.'s 15-19
6. Global Environmental Problems
  - Global climate change
  - Required reading: Field and Olewiler Ch. 20
  - Optional readings: Tietenberg et al., Ch. 13
  - Economic growth and the environment
  - Optional readings: (1) Tietenberg et al, Ch. 13
  - (2) Dasgupta, S., Laplante, B., Wang, H. and D. Wheeler (2002). Confronting the Environmental Kuznets Curve. *Journal of Economics Perspectives* 16(1).
  - Sustainable development and biodiversity
  - Required reading: Field and Olewiler Ch. 20
  - Optional readings: Tietenberg et al Ch.'s 5, 11 and 12

**Policies:**

Approach to the course and class participation: Students are expected to attend all classes and be present in class on time. Students are expected to prepare for each week of lectures by reading the assigned chapters of the text in advance. The course will be primarily lecture based and lectures will be based on the required textbook for the course. However, other readings will also be assigned, and students are responsible for all material presented in class. While lectures will be mostly theoretical, we will introduce real world examples and environmental policies, and the concepts and theory introduced in class will be reinforced through assignments throughout the term. These assignments will also give you an indication of what to expect on the examinations. Therefore, the

work you do outside of class on these assignments will go a long way in determining your outcome in the course.

Email Policy: I am happy to answer questions about the course via email, and will try to respond within a day or two. However, students should try to limit emails to critical matters such as inability to attend class or an exam or prolonged illness, and should include the course name and number in the subject line. Questions on course material should be asked during office hours or in class. The standard format for writing a letter must be used. This means it should start off with a salutation (e.g. Dear...), include full sentences and conclude with a signature that includes your name (e.g. “Sincerely, *your full name*).

Missed midterm exams: Accommodations will be made for missed mid-term exams, as long as evidence of an illness, accident or family affliction is provided. In such an event, students should immediately consult with a physician, a counsellor, or another health professional to obtain official documentation. This documentation must specifically cover the date of the missed examination.

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.*

Plagiarism and Cheating: Students are expected to observe the same standards of scholarly integrity as their academic and professional counterparts. Students who are found to have engaged in unethical academic behavior, including the practices described on page 13-14 of the Calendar or available online at [www.sites.stfx.ca/registrars\\_office/academic\\_integrity](http://www.sites.stfx.ca/registrars_office/academic_integrity), are subject to penalty by the University.

Statement on equitable learning environment:

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. These values and practices are in accord with the *StFX Discrimination and Harassment Policy* which can be found at <http://www.mystfx.ca/campus/stu-serv/equity/>.

Please feel free to talk to me about your questions or concerns about equity in our classroom or in the StFX community in general. If I cannot answer your questions or help you address your concerns, I encourage you to talk to the Chair/Coordinator of the Department/Program or the Human Rights and Equity Advisor, Marie Brunelle at [mbrunell@stfx.ca](mailto:mbrunell@stfx.ca)