University of Toronto, Economics Department, Summer 2018 Environmental Economics & Policies: ECO313

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Office Hours: Wednesdays 4:00-5:30PM, Room GE 164.

Course Description:

This course demonstrates a rigorous application of microeconomic techniques in order to respond to various environmental problems. First, we look at the interaction between natural and economic systems, and the nature of the environmental deterioration, caused mainly by fast expansion of the level of economic activities. Then, we will seek solutions to these problems in the framework of neoclassical economics, even though, we will look, however short, at the alternative critical views. We will use Optimal Control Theory to analyze the optimal path of extraction of the environmental resources. Case studies and real life environmental policies will be discussed too.

Pre-requisites:

Prerequisite: ECO200Y1/ECO204Y1/ECO206Y1,

ECO220Y1/ECO227Y1/(STA220H1,STA255H1)/(STA257H1,STA261H1)

Lectures and Tutorials:

Lectures: Tuesdays 2:00-4:00PM Thursdays 2:00-5:00PM

Tutorials: Tuesdays 4:00-5:00PM

All the 3 hours of the first class, Tuesday July 3 will be used as lecture. Some of third hours on the future Tuesdays might be used as lecture, as required. I will post an announcement in advance, in this case.

Textbooks and Readings:

This course is involved with a lot of reading. However, there is no single textbook that can be used for all the materials. Among others, there will be references to following textbooks. The readings will be assigned throughout the semester, and will be available in library reserve. There may not be enough time in classes to go over all the <u>details</u> of the reading materials, but students are required to read the materials carefully, and are responsible for everything.

Roger Perman, Yue Ma, Michael Common, David Maddison, James McGilvray (2011), Natural Resource and Environmental Economics, 4th edition, Pearson Publishing.

Ahmed Hussen (2012), Principles of Environmental Economics and Sustainability: An Integrated Economic and Ecological Approach, 3rd Edition, Routledge.

Charles D. Kolstad (2010), Environmental Economics, 2nd Edition, Oxford University Press,

Field, Barry C. and Nancy D. Olewiler, 2017. Environmental Economics, Forth Canadian Edition. Toronto: McGraw-Hill Ryerson.

Requirements:

Midterm 35% (July 19, 2018)

Writing Assignment 10% (July 29, 2018, at 6 pm)
Final Exam 55% (TBD by the registrar office)

- If for emergency reasons, acceptable by the university rules, you miss the midterm term test, you must take a makeup on **August 9, 2018**. The makeup test is a **short** (like 45-minute) test that may cover **more chapters** than the midterm. This test is a private test, which the questions, solutions, and your paper will **not** be returned to you. If you miss the midterm test, you must email me within 3 days, and submit the **hardcopy** of your documentations within a week of the missed test to me or the economics department front desk. Please do not send the scan of the documents by email. **If you miss the makeup test, you will receive zero mark, no matter why you miss the test.**
- The details of the writing assignment, which may or may not be a **group** assignment, will be announced later in the semester. The assignment file must be in pdf format, and received by email as an attachment, from your UofT account, before the date and time in above. No late assignment is accepted, so no late deduction is applicable. The assignment file in other formats or sent by a link will not be graded. No excuse like network failure or system interruption ... is acceptable. If you miss the writing assignments, they cannot be substituted by anything else.

Website and Email:

- I will post course materials and announcements on the Blackboard. It is your responsibility to follow up and get the information about the test, makeup test, and other issues.
- Notes posted on the website may not be complete. They will be completed in class. The complete version will **NOT** be available.
- Emails are used only as the last resort, and after checking the outline and website. For questions regarding the course materials you should talk to me or TA during the office hours. In case of email, you should put your **last name**, **student ID#**, **and course name in the subject line**, otherwise your email will not be read. You must use your UofT email account for your emails and to send the assignment files.

Appeals:

For re-grading your term test, you should submit the test paper, together with your <u>detailed</u> <u>explanation</u>, written on a separate paper to me <u>within 2 weeks</u> after the distribution of the test papers in class. You should NOT change, write, or put any mark on your test paper. No request will be accepted, after the deadline. In revision your grade can go either way, up or down.

Behavior and Conduct in Class:

Your cell phone must be off in class. No distraction in class will be tolerated. You will be asked to leave the class, if you distract the class by talking, surfing the internet, or by your electronic devices.

Academic Integrity:

- Students should note that any form of academic misconduct will not be tolerated. Any student caught engaging in such activities will be subject to academic discipline ranging from a mark of zero on a test or examination to dismissal from the university as outlined in the academic handbook. Any student abetting or otherwise assisting in such misconduct will also be subject to academic penalties. All suspected cases will be reported to the Department of Economics and OSAI. Please consult with the university's *Code of Behavior on Academic Matters*:

(http://www.governingcouncil.utoronto.ca/policies/behaveac.htm).

- As you know plagiarism is a violation that is prosecuted based on the university rules. In suspicious cases, I may decide to check your assignments by Turnitin.

Other Issues:

- Some supplementary examples, graphs, and materials might be discussed in class. For the test and exam, you are responsible for all the materials that are discussed in class.
- There will be some grade adjustments in terms of the final letter grade of the course, at the instructor's discretion. In case of petition for re-grading of the final exam, the adjustment may be revised.

Topics:

This is a tentative schedule for this course.

Actual pace, order, topics, and coverage of the materials might be different.

Session	Topics
1	Economics and Environment: Neoclassical vs. Ecological Views
2	Sustainability and Limits to Economic Growth, Classical, Neoclassical, and Ecological Views
3	Social Choice, Economic Efficiency and Environment Market Failure and Environment: Externalities and Public Goods
4	The Socially Efficient Levels of Emissions for Flow –Damage Pollutant, Spatial and Intertemporal Analysis of Stock-Damage Pollutant
5	Solutions to Environmental Problems: Varieties of Policy Instruments, Institutional Approaches, Command and Control Instruments, The Market Based Approaches
6	Midterm Test (July 19, 2018)
7	Solutions to Environmental Problems (Continued)
8	Regulation under uncertainty Economics of Recycling
9	Assessing Benefits of the Environmental Services: The Contingent Valuation Method, Total Cost Method, Hedonic Price Method,
10-11	The Theory of Optimal Resource Extraction: Non-Renewable Resources
12	The Theory of Optimal Resource Extraction: Renewable Resources