



Department of Economics Course Outline

		Term:	Fall 2012
Course:	Economics 677 [Seminar in Economics of the Environment]	Section:	01
Time:	MW 12:30-13:45	Place:	SS 423
Instructor:	Jared Carbone		
Office:	SS 438	Telephone:	403.220.4094
Office Hours:	W 14:00-15:00 or by appointment	E-mail:	jccarbon@ucalgary.ca

Course Description

This is a graduate seminar on selected topics from environmental economics. The only prerequisite for the course is a firm command of microeconomic theory (as evidenced by successful completion of ECON 657 for example.) The course is not a comprehensive survey of the field of environmental economics. The main objectives of the course are to learn how to read and critique journal articles from the literature and to identify opportunities for new research within the field. In other words, the goal is to get you to a point where you know the frontier of the areas we cover and can begin to craft your own research questions and make a contribution to the academic literature.

This year, we will focus on two subject areas. The focus of the literature on second-best environmental taxation, our first area of study, is on the degree to which new environmental regulations interact with the pre-existing tax system and how that informs the optimal design of these regulations. The general conclusion is that broad-based environmental regulations -- like a carbon or a gasoline tax for example -- can have important impacts on the overall performance of the economy through their effect on the reallocation of basic factors. The study of international trade and environment, our second focus area, deals primarily with how regional environmental regulations or trade policies can have unexpected effects on the environment through the linkages with other parts of the world that international trade implies.

A common theme underlying both subject areas is the idea that general equilibrium effects play an essential role in shaping the outcomes of policy analysis. As a result, we will spend some time learning about the general equilibrium models used to quantify these effects, sometimes known as computable general equilibrium (CGE) models. I will teach you to program simple examples of these types of models (using the GAMS modeling language) and conduct counterfactual policy experiments using them to gain economic intuition.

Another common theme is that both subject areas apply directly to the economics of global warming, one of the most salient environmental policy problems of our time. We will often conduct our investigation with an eye toward thinking about what it all means for climate change policy.

Here are a couple of reasons why you might consider taking 677 this year:

1. Many of the environmental policies currently in need of evaluation (like those associated with combating global warming) are large interventions that affect many parts of the economy simultaneously. As a result, general equilibrium effects play a central role and learning about how these mechanisms work will help your ability to critically appraise these types of policy proposals. This is a skill that will be of value to you across a range of different future careers paths for economists whether it be in the energy sector, government or academia.
2. One of the most widely used tools to evaluate proposed policies is through simulation via CGE models. If you think that your future will bring you into contact with provincial or federal policies related to environmental or energy policy (or international trade or public finance), you will almost certainly come into contact with these models and you will need to know how to evaluate their results.

Course Materials

There is no required textbook or reading packet for this course. Course readings will be made available through the course website or in class. You may find the following books to be useful reference materials.

Baumol, William J. and Wallace E. Oates, The Theory of Environmental Policy, 2nd edition, Cambridge University Press, 1988.

Kolstad, Charles, Environmental Economics, Oxford University Press, New York, 2010.

Freeman, A. Myrick, The Measurement of Environmental and Resource Values: Theory and Methods, 2nd edition, Resources for the Future, Washington DC, 2003.

Perman, Common, Mcgilvray and Ma, Natural Resource and Environmental Economics, 3rd edition, Addison Wesley, 2003.

Course Requirements

Final grades will be based on class participation (20%), homework assignments (40% collectively) and a final exam (40%). Aside from assigned readings, homework will consist of three major computer assignments to learn the numerical modeling concepts. It is critical that you do all of the assigned reading before each class meeting and participate in class discussions. The final exam will take place during the exam period.

Computer Assignments -- You will complete three major computer assignments over the course of the term. Typically, I will present some computer modeling concepts in the lectures leading up to the assignment and the homework will require you work on the computer to reproduce or extend some of the manipulations I showed you in lecture. You will email me your GAMS code along with a short written explanation of your results on the assigned due date. So, for example, I will show you in lecture how to construct a computer model in which to simulate the effects of an environmental tax. I will post on the course website the GAMS code responsible for setting up the basic model and then, as your homework assignment, ask you to reproduce the tax experiment on your own and analyze the results. Alternatively, I may ask you to change one assumption of the model on your own and see how it affects the results of the tax experiment.

Course Outline and Readings

See the course website: http://www.jaredcarbone.org/econ_677

Tests and final exams are marked on a numerical (percentage) basis, then converted to letter grades. The course grade is then calculated using the weights indicated above. As a guide to determining standing, these letter grade equivalences will generally apply:

A+	97-100	B	83-87	C-	70-73
A	93-97	B-	80-83	D+	65-70
A-	90-93	C+	77-80	D	60-65
B+	87-90	C	73-77	F	< 60

A passing grade on any particular component of the course is not required for a student to pass the course as a whole.

Non-programmable calculators will not be allowed during the writing of tests or final examinations.

The final exam will be set by the Department of Economics lasting 2 hours.

Tests and exams will not involve multiple-choice questions.

Notes:

- Students seeking reappraisal of a piece of graded term work (term paper, essay, etc.) should discuss their work with the Instructor *within fifteen days* of the work being returned to the class.
- It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.

Safewalk / Campus Security: 220-5333
 Emergency Assembly Location – Professional Faculties Food Court
