

UNIVERSITY OF GUELPH
College of Management and Economics
Department of Economics and Finance
Course Outline

ECON 2100 Economic Growth and Environmental Quality, Fall 2011

Instructor: Prof. Douglas Auld

Office: MacK 703 extension 58320

Office Hours: M. 11–12; W. 11–12 and by appointment.

Email: dauld@uoguelph.ca

It is your responsibility as a student to be aware of and to abide by the University's policies regarding academic misconduct, e-mail communication, maintaining copies of out-of-class assignments, what to do when you cannot meet a course requirement and the drop date for the semester. To better understand these policies, visit:

<http://www.economics.uoguelph.ca/student-responsibilities-policies.asp>

Text Book: Environmental Economics, Third Canadian Edition, Barry Field and Nancy Olewiler, McGraw-Hill Ryerson, 2011

The 2010 summer Gulf of Mexico oil disaster was one of the greatest environmental catastrophes the world has experienced. Some damages such as lost business for tourist operators can be quantified but can society put a price on the loss of the ecosystem in the Mississippi Delta? Is the possibility of environmental damage part of any economic activity? Are there engines of economic growth that should never be started because of the potential for environmental disaster?

Only one month before the Gulf oil drilling accident, the nations of the world gathered in Copenhagen to discuss global strategies to reduce greenhouse gases. Why was there no agreement on what to do? Why, 20 years earlier, did the world not only agree to eliminate the discharge of CFCs into the atmosphere but succeed in accomplishing the goal?

To date, in 2011, there have been over two dozen articles on environmental issues in The Globe and Mail alone. These stories and the stories of the past few years have addressed such topics as emissions from the oil sand development in Alberta, global warming and climate change, carbon taxes, marketable transferable discharge permits, replacing gasoline with ethanol, new 'peak load pricing' strategies to reduce electricity use in Ontario, agricultural run-off into rivers, landfill expansion, recycling and container re-use.

All of these have significant and far-reaching ramifications on how our economy functions and what happens to our standard of living and indeed the future course of

economic development on the planet. In response to these concerns, municipal, provincial and federal governments have enacted or are enacting a wide range of policies to 'control' pollution and/or enhance environmental quality. In this course, we will examine how basic economic theory and extensions of that theory shed light on the questions around environmental policy, climate change and sustainable development. Economic activity and pollution, in one form or another, are inextricably linked. The challenge is to find public policies that allow us to improve environmental quality, now and in the future, while at the same time, minimizing the impact on our standard of economic well being.

FORMAT

Some lectures will focus on the theoretical foundations associated with economics and environmental policy. Others will provide an opportunity to discuss how the theory applies to current issues of environmental quality and sustainable development. For example, we might examine the consequences of climate change on arctic tourism. As a student in this course, you are responsible for the material covered in all classes and the material assigned in the course outline below.

Two lectures at the end of September will be delivered in electronic format tied into on-line discussion. Details will be provided at the beginning of the course.

EVALUATION

There will be two mid term exams: the first, on WEDNESDAY, OCTOBER 5, 2011 will count for 10 % of the total course evaluation and the second mid term, FRI., OCT. 28th, 2011 will account for 20 % of the overall evaluation in the course

Second, you are required to research and submit a short "commentary" on one of the topics listed below. Your commentary must be double spaced and NOT exceed FIVE pages. Since I encourage team work, this may be done in collaboration with another student in the course. This counts for 20 % of your evaluation. Due DATE: Monday, November 14, 2011.

The final exam, DEC 16,2011 FROM 2 30 TO 4 30 pm is worth 50% but may be worth 70% if your performance is **a significant improvement** over the second mid term exam result. This will be explained in class

TOPICS FOR WRITING YOUR SHORT COMMENTARY [others may be added later]

1. In the summer of 2011, the Australian government announced that a carbon tax would be levied on the 700 biggest polluters in the country. What are the likely effects of this policy on inflation and employment, the distribution of income in Australia and the quality of air in Australia?
2. "In light of the Gulf of Mexico oil disaster, all undersea oil and gas drilling companies must make a deposit of \$ 100 million into an insurance fund that would compensate those damaged if there was a drilling accident. Comment on the fairness of such a proposal and how it might be managed and implemented.
3. What are the consequences of requiring all single family dwellings, condominiums and apartments, in every Ontario city, to compost biodegradable waste?
4. "To reduce the use of electricity and fossil fuels for home heating, all new homes in Ontario must embody passive solar heating." Comment.
5. British Columbia's carbon tax is a model for the effective control of greenhouse gases. Discuss.
6. "Subsidizing the production of electricity from wind turbines in an efficient use of tax revenues." Comment.
7. "What would be the economic impact of a federal government tax of \$ 2,000 on any vehicle that did not achieve an average fuel consumption of 8 litres/100 km?"

Detailed Course Outline

TOPIC	CHAPTER/PAGES
1. The Economics of Property Rights and the Environment ¹	Ch 1 pp 6–7 Ch 10 pp 162–179
2 Environmental Economics: Going Where Markets Fear to Tread	Ch 1 pp 2–14;18–19
3. The Materials Balance, Residuals and Response	Ch 2
4. The Environment and Sustainability.	Ch 2 pp 15–17

¹ For a classic treatment of this topic, see Dales, John, Pollution, Property and Prices. University of Toronto Press, 1968: Republished in 2002 by Edgar Elgar Publishing.

5. Micro economic tools for environmental Issues analysis ²	Ch 20 pp 256–9
6. New Tools for Analysis: Measuring Pollution's Damage and the Cost of Reducing Pollution	Ch 5
7. What is the Value of Environmental Quality? The Benefits of Reduced Pollution and The Costs of Achieving Target Levels of Environmental Quality	Ch 7, 8
8. Pollution Reduction Strategies	
a. Standards	Ch 11
b. Emission Taxes and Subsidies	12
c. Transferable Discharge Permits	13
d. Recycling and Re use	19
–Municipal Garbage	19
9. Uncertainty and Risk in Policy Formulation	14
10. The Economics of Global Warming: Impact and Responses to Climate change	Ch 20
a. The Montreal Protocol	
b. The Kyoto Accord	
c. Copenhagen	
d. Canada's response to the challenge	
e. The Costs of Climate Change:	
The Stern Report [material to be assigned]	
Other references	

² To help you review these topics, a good reference text is *Microeconomics, Canada in the Global Environment*, Michael Parkin and Robin Bade, 6th Ed., 2006, Pearson, Toronto, chapter 1 to 5