ECON 482: ADVANCED TOPICS IN ENVIRONMENTAL ECONOMICS

Professor Devon Garvie, 344 Dunning Hall, 613-533-2286
Email: garvie@econ.queensu.ca
Course website: http://qed.econ.queensu.ca/pub/faculty/garvie/econ482/482Home.html
Office hours: Mondays 1-2:30pm or by appointment

COURSE OVERVIEW
This is a seminar course in which students will be required to research and write a major paper on an approved topic, present their paper to the class, and participate in the general discussion of other students’ presentations. The general focus of papers is to be the application of microeconomic theory to topics related to the environment. A selection of past paper titles is provided to show that a broad range of topics are acceptable.

THE PAPER
The paper is to be a maximum of 5,000 words, double-spaced and in 11 or 12 pt font (about 20 pages). Writing the paper in this course is a process so a component of the paper grade is a process grade. The process grade will reflect the quality of revisions and improvements made to your paper from your draft to the revised draft presentation to your final paper. Final papers are due no later than December 3rd.

PAPER PROPOSAL
A 2-2½ page paper proposal is due Thursday, September 24. Your proposal should include the following:
• Identify and provide a brief description of your topic and, if possible, your central thesis
• Preliminary paper outline – identify major sections and sub-sections of paper and indicate, in as much detail as possible, expected sectional content
• Preliminary bibliography – results from your preliminary scientific, institutional and economic literature searches using EconLit, RePec, RFF, etc.

DRAFT PAPER
A draft of your paper is due two weeks prior to your presentation date. Within a few days of your draft due date, I will meet with you to discuss your draft and provide you with constructive suggestions as to how you can improve your paper. Your revised draft paper (in pdf format) must be emailed to me for posting on the course website three days prior to presentation; this draft will be read by your classmates and should reflect your presentation content.
PRESENTATION
You will have 35-45 minutes (depends upon class size) to present your revised draft paper to the class. A ten minute class discussion will follow.

SEMINAR PARTICIPATION
Seminar participation is an essential component of this course and, as such, is worth 15% of your final grade. Students are expected to attend all seminars, to read all seminar papers in advance and to participate in all seminar discussions. The seminar participation grade will reflect the level and quality of your contributions to the seminar series: this grade component is a participation grade not an attendance grade. To receive an “A” seminar participation grade, you must make substantive contributions to the seminar series on a regular basis. Substantive contributions entail posing well-developed, on-topic responses that advance the class discussion. For instance, a substantive contribution can be made by asking a thought-provoking question, sharing relevant empirical or economic theory observations, offering recommendations or an alternate viewpoint, providing outside research with proper citation that substantiates or refutes the presenter’s point of view. Students who do not participate substantively in the seminar series will receive an “F” seminar participation grade. I will let you know your participation grade evaluated at the mid-point of the seminar series.

The seminar participation component of the course grade can make a big difference to your final grade. A student who rarely participates in the seminar may receive a final grade one full letter grade lower than the grade they receive on their paper and presentation. Thus, lack of participation can lower a paper and presentation grade in the A range to a final grade in the B range.

EVALUATION
Final paper, process, and presentation 85%
Seminar participation 15%

TENTATIVE TIMETABLE
(SUBJECT TO CHANGE DEPENDING UPON CLASS SIZE)
Sept 14  Course overview
Sept 17  Q&A session to discuss environmental economics and paper topics
Sept 24  Paper proposals due, scheduling of presentation dates and individual appointments to discuss paper proposals
Sept 25-Oct 7  Individual appointments to discuss paper proposals
Oct 5  Class meets: tips on how to write a “good” paper
Oct 22  First presenter’s draft paper due
TBA  Individual appointments to discuss draft papers
Nov 2-Nov 30  Class meets: revised draft paper presentations
Dec 3  Final paper due
DEPARTMENTAL AND UNIVERSITY POLICIES

The Economics Department has TWO policies with respect to Honors Seminar courses, both of which are strictly enforced by the Department: an academic integrity policy and a mandatory seminar attendance policy. Regarding academic integrity, the Department requires submission of an electronic copy of your paper to the Department for turnitin checking. The course email submission address is econ482papers@econ.queensu.ca. Regarding seminar attendance, the Department policy is:

“Since this is a seminar course, participation is crucial to its success. Therefore attendance is mandatory. If you have to miss a meeting of the course for a legitimate reason (illness or family emergency) please notify the instructor as soon as possible. Repeated absences will result in a failure in the course.”

The University also has an Academic Integrity Policy. Please see the course website for details.

WHAT KIND OF PAPER?

I recommend a case study paper which provides a description and critical economic analysis of an environmental problem and its associated current (or proposed) solution such as an environmental policy, a negotiated agreement or a landmark judicial decision.

CHOOSING AND RESEARCHING A PAPER TOPIC

The course website provides a number of links to excellent environmental news sources and organizations. Visit these links to read about “hot” environmental topics as well as myriad controversial and pressing environmental problems facing specific countries and/or the global community.

Once you find a topic that interests you, you will need to undertake research on three fronts: science, institutional, and economic theory. Scientific background information is usually the easiest to find while finding detailed institutional background information can be difficult and frustrating; when available, primary sources for institutional information such as legislative acts, treaty texts or legal rulings are often the best source. A good place to start searching for relevant economic theory is to look through an upper year environmental or resource economics text and the North-Holland Handbook in Environmental Economics for a brief introduction to and overview of economic theories related to your topic. A link to the Handbook in Environmental Economics is provided on the homepage of the course website: the Handbook is a three volume set which provides economic theory literature surveys of many important topics in environmental economics. Other North-Holland Handbooks such as the Handbooks of Resource Economics, Agricultural Economics, and Law and Economics may also contain surveys related to your topic. Once you have a general sense of the science and economics of the topic, the next step is to undertake a comprehensive economic literature search.

The course website provides several links to good economic literature search engines for published and working papers, academic journals specializing in environmental and resource economics and quasi-
academic institutions such as Resources for the Future (RFF) and the research departments at the World Bank, FAO, OECD, EPA, etc., that undertake and publish high quality applied technical papers.

EXAMPLES OF PAST PAPERS

PURVIS PRIZE WINNERS (COPIES AVAILABLE IN MAC URQUHART READING ROOM)
Risky Bugs, Uncertain Futures: Effect of Spatial, Temporal and Risk Interactions on Optimal Management in British Columbia’s Interior Forests (2008)
Towards Sustainable Fishery Management in Jamaica (1999)

FUN, UNUSUAL AND CREATIVE TOPICS
Don’t Get Stung by Insect Pollinator Loss: An Analysis of Insect Pollination Service Valuation
A World Without Sharks: An Economic Analysis of Predator-Prey Dynamics
Use and management of the Plain of Reeds before, during and after the Vietnam War
Should Golf Courses be Exempt from Ontario’s Cosmetic Pesticide Ban?
Wildlife Management: A Case Study of the Northern Ontario Black Bear
Illegal Ocean Dumping by Cruise Lines
The Lead Poisoning Crisis in Zamfara, Nigeria: How Microfinance Can Help
Comparative Analysis of Organic Certification Schemes in the Cut Flower Market
Domestic roof water harvesting’s potential to mitigate Chennai’s water crisis

A CRITICAL ECONOMIC ASSESSMENT OF
British Columbia’s Carbon Tax Act
Canada’s Bill C-15 for controlling intentional illegal bilge oil dumping
US Endangered Species Act and Canada’s Species at Risk Act: Case of the Southern Resident Killer Whale
Building Efficiency Policies to Mitigate Climate Change
Joint Management of Takeshima’s Hydrocarbon Reserves
Aviation Policies to Mitigate Climate Change
Point/Non-point Tradable Phosphorus Permits in the Minnesota River Basin
Ontario’s Safe Drinking Water Act
Ontario’s Biomedical Waste Management Regulations
Ontario’s Tire Stewardship Scrap Tire Diversion Program Plan
Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement
Hong Kong’s Wetland Policy
Salmon Aquaculture in British Columbia
Forestry Policy in British Columbia
UK CO₂ Emissions Trading System
Acid Rain Policy in Korea
Australia’s Great Barrier Marine Reef Act
Kyoto Protocol’s Joint Implementation Mechanism
Kyoto’s Clean Development Mechanism: Huitengxile Wind Farm Project
US Superfund Liability Regime
Environmental Regulation of Stelco and Dofasco
Valuing the Amazon
MISCELLANEOUS TOPICS

When Will Climate Change Negotiations Heat Up: Strategic Delay and Climate Change Valuation Uncertainty
The Big Fracking Issue: Regulation of Hydraulic Fracturing in the United States
The Economics of Adaptation to Climate Change: the case of Bangladesh
Glitter and Greed: The Canadian Diamond Mining Industry and Diavik Diamond Inc.
Singapore’s Road Pricing: Congestion Taxation as a Means to Decrease Vehicle Miles Travelled
The Answer my Friend is Blowing in the Wind: Denmark’s Wind Energy Policies
Blast-fishing and Coral Reef Degradation in Indonesia
Renewable Energy Policy: A Case Study of Windfarming in California
Is Reducing Carbon Dioxide Emissions through Public Voluntary Agreements Efficient?
Mobile Source Air Pollution: A Comparative Analysis of Dhaka, Bangladesh and Kolkata, India
Green Products and Eco-Labeling
Depletion of ocean fisheries and New Zealand’s ITQ system
Biodiversity loss and the Merck-INBio bioprospecting contract
Valuing environmental damages under the US Oil Pollution Control Act
The Economics of Nuclear Safety in Russia

NEGOTIATED ENVIRONMENTAL AGREEMENTS

The Long Way around Internalizing Risk in Project Financing: the Equator Principles
Heroes on the Half-Shell: A Critical Economic Assessment of the Sea Turtle Agreement
Persistent Organic Pollutants and the Stockholm Convention
Forestry Carbon Sequestration and the Kyoto Protocol
A Game Theoretic Analysis of the Kyoto Protocol

LAW AND ECONOMICS

Depletion of coastal fisheries and New Brunswick’s Burnt Church Lobster Fishery, the Mik’maq and the Marshall Decision
Economic and Environmental Implications of Supreme Court Ruling in Schmeiser v Monsanto
Cooper v Aviall: Interpreting Liability Rules Under CERCLA and Superfund
Environmental Risk and Bank Liability under CERCLA
Corporate liability and the Exxon Valdez oil spill

WHAT MAKES A “GOOD” PAPER?

A “good” paper is a well-researched, well-organized, well-written paper that provides substantive and insightful analysis of the case.

1. WELL-RESEARCHED
   • Identify and describe salient scientific features of the environmental problem
   • Map scientific features into economics
Identify relevant economic theories to analyse the problem and critically assess solutions

Extensive scientific and economic research is required to write a good paper. Indeed, the starting point of economic analysis of an environmental problem is science. Science informs economics or, alternatively, economics is shaped by the science because the science dictates the structure of the economic analysis. The Backgrounder section is the essential starting point of your paper, both to establish that there is indeed an anthropogenic caused environmental problem and to identify and explain the essential nature of the problem (scale, spatial, temporal, risk dimensions, etc.). The science dictates the economic models you should use to analyse the problem and to critically assess solutions (e.g., externality model, public goods model, common property resources model, environmental quality model, economics of risk, etc.). You are expected to undertake a comprehensive search of the economic literature to find level-appropriate theoretical economic models to apply to your case. **The expectation is that you apply at least fourth year level models NOT first or second year level models.**

2. **WELL-ORGANIZED**
- paper should have a logical structure and flow
- good use of sections and sub-sections to organize stand alone content
- skeleton outline for a sample case study is provided below for illustrative purposes only. Relative section lengths and best content organization will depend upon paper topic hence will vary from paper to paper. Example shows expectation that no more than a third of your paper should contain descriptive content and at least half should contain analytical content.

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**SAMPLE ENVIRONMENTAL CASE STUDY SKELETON OUTLINE**

I. **INTRODUCTION (1½ –2 PAGES)**

II. **BACKGROUNDER (4 –6 PAGES)**
   A. **The problem:** descriptive overview of environmental problem and identification of key scientific and economic characteristics of problem
   B. **A solution:** descriptive overview of environmental “solution” to be critically assessed

III. **CRITICAL ECONOMIC ANALYSIS AND ASSESSMENT (10 –12 PAGES)**
    Draw upon key characteristics of problem and relevant normative and positive economic theories to identify source(s) of institutional failure, *Pareto* efficient solution and to provide a critical economic analysis and assessment of current (or proposed) solution

IV. **CONCLUSION (1 –1½ PAGES)**
3. **Well-written**
   - good grammar
   - assertive, concise writing
   - proper sentence and paragraph construction
   - effective use of footnotes

4. **Substantive and Insightful Analysis**
   - correct, sophisticated and well-executed application of theory to practice which enables you to make substantive and insightful analytical points