University of Waterloo

Faculty of Environment

**ENBUS 408 – Best Practices in Regulation**

**Instrument Choice in Environmental Policy**

**Fall Term 2020**

COURSE SYLLABUS

Course Instructor Neil Craik

Contact Information [ncraik@uwaterloo.ca](mailto:ncraik@uwaterloo.ca)

Office Hours to be determined by class poll

Office EV3 4231

Course Prerequisite ENVS 201 (or waiver from instructor)

Course Description

This course examines the use of different forms of environmental regulatory instruments, with a focus on market instruments. The use of alternatives to traditional (command and control) instruments, such as disclosure laws, emissions trading, environmental taxes and fees (such as congestion charges) and conservation banking, has become much more prevalent in the last twenty years in both Canada and elsewhere, as regulators seek to take advantage of the efficiency gains and incentive structures that these instruments may provide. This course will consider the underlying economic and policy reasons in support of the use of alternative forms of instruments, as well as some of the criticisms. As much of this course will focus on the underlying rationales and approaches to environmental policy approaches, the course will incorporate a number of practical exercises in policy assessment

# The key learning objectives for the course are to develop an understanding of the following areas:

* Basic types of environmental regulatory instruments and the reasons for their use
* Application of cost/benefit analysis to environmental policy
* Application of foundational economic concepts to environmental policy creation
* Basic market functions and their relationship to efficiency in the context of the environmental
* The role of innovation in environmental policy and the role of policy in promoting innovation
* The distributive consequences of environmental policy and the role of fairness
* The implication of behavioral economics for environmental policy
* Policy transitions

In addition to these substantive areas, the course will require students to develop a policy brief related to market instruments. The purpose of this exercise is to engage in a deeper analysis of a single instrument, as well as to learn how to write a short policy brief.

In order to keep out discussions current, I may suggest additional readings reflecting current debates. For example, in this year’s class, I will likely devote some time to examining the linkages between the COVID19 pandemic crises, and the idea of a green recovery.

# Course Materials

Required text: N. Keohane and S. Olmstead, *Markets and the Environment, 2d.* (Island Press, 2016)

The course instructor will provide supplementary material online.

Course Structure

The first part of this course will focus on the different ways in which regulators manage the natural environment, with an emphasis on market-based instruments. The course lectures will be available on the LEARN site, and will supplemented by synchronous discussions, as well as individual problem set assignments. The second part of the course will focus more the tools and processes of environmental policy creation and assessment. This part of the course will be project based with activities leading to the preparation of a policy brief and related advocacy tool. The project will be an individual project, but students will be encouraged to collaborate through peer review and other exchanges.

Throughout the course there will be several group exercises, which will require students to meet (remotely) to discuss and prepare exercise responses. There will be opportunities through the term for group discussions and review of materials. These will be held synchronously at prearranged times.

**Course Evaluation**

**Schedule**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Assignment | weighting | type | Date Handed Out | Due Date |
| Problem Set 1 | 10 | Individual | September 14 | September 21 |
| Problem Set 2 | 10 | Individual | September 28 | October 5 |
| Cost Benefit Analysis | 10 | Group | September 14 | September 28 |
| Carbon emission reduction strategy | 10 | Group | October 19 | November 9 |
| Policy Brief   1. Preparation assignment 2. Policy brief 3. Advocacy Tool | 10%  40%  10% | Individual  Individual  Individual | October 5 | November 16  November 30  December 7 |

**Problem Sets 20% (2x 10%)**

The problem sets will review the foundational concepts introduced in the class and are geared towards ensuring that students know and understand the fundamental aspects of market regulation. Each answer set will be worth 10 %.

**Cost Benefit Analysis**

**Instrument Choice Assignment on Carbon Emission Reduction**

**Policy Brief 30%**

Students will be required to prepare a policy brief outlining policy options related to the adoption of a regulatory instrument in response to a defined environmental problem and describing the implications for policymakers. A specific discussion of how to write a policy brief will occur in week 6. A grading template will be supplied with the assignment instructions.

Course Communication

Communication by the instructor to students will be sent to students ‘uwaterloo” email through D2L or through postings to course D2L site. Students are responsible for ensuring prompt retrieval of course messages.

University and Faculty Requirements and Notices

* + Academic IntegrityIn order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. www.uwaterloo.ca/academicintegrity/
  + Students who are unsure what constitutes an academic offence are requested to visit the on-line tutorial at http://www.lib.uwaterloo.ca/ait/
  + Research EthicsPlease also note that the ‘University of Waterloo requires all research conducted by its students, staff, and faculty which involves humans as participants to undergo prior ethics review and clearance through the Director, Office of Human Research and Animal Care (Office). The ethics review and clearance processes are intended to ensure that projects comply with the Office’s Guidelines for Research with Human Participants (Guidelines) as well as those of provincial and federal agencies, and that the safety, rights and welfare of participants are adequately protected. The Guidelines inform researchers about ethical issues and procedures which are of concern when conducting research with humans (e.g. confidentiality, risks and benefits, informed consent process, etc.). If the development of your research proposal consists of research that involves humans as participants, the please contact the course instructor for guidance and see [www.research.uwaterloo.ca/ethics/human/](http://www.research.uwaterloo.ca/ethics/human/)
  + Note for students with disabilities:The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.
  + Religious ObservancesPlease inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.
  + **Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4, [www.adm.uwaterloo.ca/infosec/Policies/policy70.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm). When in doubt please contact your Undergraduate Advisor for details.
  + **Discipline**A student is expected to know what constitutes academic integrity, to avoid committing academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline, [www.adm.uwaterloo.ca/infosec/Policies/policy71.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm). For typical penalities check Guidelines for Assessment of Penalties, [www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm](http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm)
  + **Appeals:A** decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 –(Student Discipline) may be appealed if there isa ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) [www.adm.uwaterloo.ca/infosec/Policies/policy72.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm)

Detailed Course Outline

* Module 1 (September 7) –Introduction to Course and key concepts
  + Readings
    - Course Syllabus
    - Keohane and Olmstead, c.1
    - D. Esty and M. Porter, (2011), “Pain at the Pump? We Need More” *New York Times*
    - P. Krugman, (2010) “Building a Green Economy”, *New York Times*
    - D. Fullerton and R. Stavins, (1998) “How Economists see the Environment”, *Nature, 395*
    - R. Stewart, (2001) “A New Generation of Environmental Regulation”, *Cap. U. L. Rev., 29,* 21. “Shortcomings” (p.4 to 8)
    - N. Gunningham, (2009) “Environmental Law, Regulation and Governance: Shifting Architectures”, *Journal of Envt’l L., 21,* 2, (p.182-193)
  + Lectures
* Module 2 (September 14) - The Costs and Benefits of Environmental Protection
  + - Keohane and Olmstead, cc.2-3
    - K. Arrow et al., (1996) “Is there a Role for Benefit-Cost Analysis in Environmental, Health, and Safety Regulation”, *Science, 272,* 221
    - S. Kelman, (1981) “Cost-Benefit Analysis: An Ethical Critique” *AEI Journal on Government and Society Regulation, 5*
    - L. Goulder and R. Stavins (2002), “An Eye on the Future”, *Nature, 419*
    - Pizer et al., (2014) “Using and Improving the Social Cost of Carbon” *Science,* v.346, 6214.
    - Fat Tails
* Module 3 (September 21) - Markets and Efficiency
  + - Keohane and Olmstead, cc. 4-5
    - N. Stern, (2007), “The Economics of Climate Change”
* Module 4 (September 28) – Implications of Using Markets: Innovation and Equity
  + - Rubin,
    - Keohane and Olmstead, cc.8-9
    - M. Porter and C. Van der Linde, (1995), “Green and Competitive: Ending the Stalemate” *Harvard Business Review*
    - N. Ashford et al, (1985) “Using Regulation to Change the Market for Innovation” *Harvard Envt’l L. R. ,9*
    - D. Driesen, (2003) “Does Emissions Trading Encourage Innovation?”, *Envt’l L. R, 33,* 10094
* Module 5 (October 5) – Introduction to Policy Briefs

Reading Week (October 12)

* Module 6 (October 19) – Instrument Choice and Types of Market Instruments
  + - Keohane and Olmstead, c.10
    - R. Stavins, (2001) “Lessons from the American Experiment with Market-Based Environmental Policies”, Resources for the Future
    - N. Ashford and C. Caldert, (2008) “Economic Subsidies”, in *Environmental Law, Policy and Economics*
    - N. Olewiler (1990), “The Case for Pollution Taxes” in *Getting it Green: Case Studies in Canadian Environmental Regulation*
    - BK. Jack et al. (2007), “Designing payment for ecosystem services: Lessons from previous experience with incentive-based mechanisms”, *Proceedings of the National Academy of Sciences (PNAS)*
    - T. Litman, (2011) “London Congestion Pricing”
    - R. Coase (1960), “The Problem of Social Cost”
* Module 7 (October 26) – Carbon Markets Design Issues
  + - Ecofiscal Commission, (2015) *The Way Forward for Ontario: Design Principles for Ontario’s New Cap-and- Trade System*
    - M. Gillenwater, “What is Additionality?” GHG Institute
    - M. Wara and D. Victor, (2008), “A Realistic Policy on International Carbon Offsets” Stanford University Working Paper
    - Pew Climate, (2010) “Carbon Market Design & Oversight”
    - National Round Table on the Environment and Economy (NRTEE), (2009) *Achieving 2050: A Carbon Pricing Policy for Canada*
    - Bataille, Dachis and Rivers, (2009) *Pricing Greenhouse Gas Emissions: The Impact on Canada’s Competitiveness,* CD Howe Institute
* Module 8 (November 2) Information as Regulation
  + - Fung et al. (2007) *Full Disclosure: The Perils and Promise of Transparency*, c.1
    - Kosack and Fung, (2014) “Does Transparency Improve Governance”
    - R. Mitchell, (2011) “Transparency for Governance: The Mechanisms and Effectiveness of Disclosure-based and Education-based Transparency Policies”
    - Lessig, (2009) “Against Transparency”
* Module 9 (November 9) – Behavioral Economics and Environmental Policy
  + - I. Basen, “Economics has met the enemy, and it is economics”, Globe and Mail, October 15, 2011
    - D. Kahneman (2003), “Maps of Bounded Rationality”
    - L. Venkatachalam, (2008), Behavioral economics for environmental policy*. Ecological Economics, 6*7, 4, (p. 640-645)
* Week 10 (November 16)–Policy Transitions
  + - Trebilcock, Dealing with Losers
    - Covid 19 and Climate Policy