

McGill University
Department of Economics
ECON 726- Selected Topics in Environmental Economics
Winter 2019
W: 4:05-6:55

Professor: H. Benchekrout
Office: Leacock 316
E-mail: hassan.benchekrout@mcgill.ca
Office Hours: Th 2-3 or by appointment.

Objectives: We will cover different topics related to environmental economics and natural resource management. The applications we will include (i) renewable and nonrenewable resource extraction under different market structures (ii) transition to clean technologies (iii) implications of environmental regulation (iv) transboundary pollution games and (v) international environmental agreements (free riding incentives, the role of technologies, adaptation, transfers). We will in general treat the case of pollution flows as well as pollution that has long lasting effects such as GHGs, i.e. stock pollutant. If time permits, we will also cover recent developments in resource economics and/or the interplay of trade and environmental policy.

Suggested Textbook References:

“Differential Games in Economics and Management” by Dockner, Jorgensen, Long and Sorger (2000) HB144 D53 2000

“Microeconomic Theory” by Mas-Colell, Whinston and Green (1995) MWG, HB172 M6247 1995

“Optimal Control Theory and Static Optimization in Economics” by Daniel Léonard and Ngo Van Long (1992) LL HB143.7 L46 1992

“A Survey of Dynamic Games in Economics” by Ngo Van Long (2010) Ebook

“Games and Dynamic Games” by Haurie, Krawczyk and Zaccour (2012)

“Oligopoly, the environment and natural resources” by Lambertini (2013)

“Climate policy and nonrenewable resources: the green paradox and beyond”, by Pittel, Van der Ploeg, Withagen (2014): available in ebook format

Course Evaluation:

Presentations and participation 35%

2 exams 65% (tentative dates: Feb 6th (25%) and March 20th (40%))

Required official statements:

- McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/integrity for further information).
- According to Senate regulations, instructors are not permitted to make special arrangements for final exams. Please consult the calendar, section 4.7.2.1, General University Information and Regulations, at www.mcgill.ca.
- In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Tentative outline

1. Externalities and public goods
2. Renewable resources and environmental systems
3. Optimal management of environmental and other natural resources (deterministic and stochastic cases)
4. Strategic behavior and the environment, the case of stock externalities
5. Tentative list of specific topics to be covered
 - Social norms and resource management
 - Some mechanisms for public good games
 - Taxation in the case of a stock externality
 - Transboundary pollution game
 - Carbon Tax
 - Pollution management and federalism
 - Environmental regulation and information
 - International Environmental Agreements (IEAs)

Some relevant links:

<http://www.ec.gc.ca/>
http://ec.europa.eu/environment/index_en.htm
<http://www.epa.gov/>

Climate Change

<http://unfccc.int/>
<http://www.ipcc.ch/>

Energy

<http://www.iea.org/>
http://www.opec.org/opec_web/en/

General

<http://repec.org/>
<http://www.ssrn.com>

“Choosing environmental policy: comparing instruments and outcomes in the United States and Europe”, by Harrington, Morgenstern, Sterner (2004)
HC110 E5 C49 2004