



## Department of Economics Course Outline

|                      |   |                   |  |
|----------------------|---|-------------------|--|
|                      |   | <b>Term:</b>      | Winter 2008  |
| <b>Course:</b>       | Economics 677<br>[Seminar in Economics of the<br>Environment] | <b>Section:</b>   | 01   |
| <b>Time:</b>         | MW 13:00 – 14:15  | <b>Place:</b>     | SH 288<br>(subject to change)                                  |
| <b>Instructor:</b>   | Dr. J. A. Smulders  |                   |  |
| <b>Office:</b>       | SS 438  | <b>Telephone:</b> | 220-4094   |
| <b>Office Hours:</b> | TBA   | <b>E-mail:</b>    | <a href="mailto:smulders@ucalgary.ca">smulders@ucalgary.ca</a> |

**Textbook(s):** n/a

### Book(s) on Reserve

- Aghion, P. and P. Howitt 1998, Endogenous growth theory, Cambridge: MIT press.
- Dasgupta, P.S. and G. W. Heal 1979, Exhaustible Resources and Economic Theory, Cambridge: Cambridge University Press.
- Neumayer, E. 2003. Weak versus Strong Sustainability: Exploring the Limits of Two Opposing Paradigms. Second revised edition, Cheltenham and Northampton: Edward Elgar Publishing.
- Perman, Roger, Yue Ma, James McGilvray and Michael Common (2003), Natural Resource and Environmental Economics, 3rd edition, Essex: Longman.
- Weitzman, M. L. 2003. Income Capital and the Maximum Principle. Cambridge: Harvard University Press.

### Course objective:

Analysis of following topics: Environment, Energy, Technology, and Economic Growth.  
Key questions: Are there limits to growth due to scarcity of energy resources and environmental constraints? What are the effects on economic growth of environmental policy (climate policy in particular) and energy conservation measures?

Key aspects: sustainability, discounting, substitutability, technological change, irreversibility and uncertainty.

Method: we will mainly discuss the analytics, as a way to understand the outcomes from numerical/practical tools (emission scenarios, CGE modelling, integrated assessment models).

**Course outline**

1. Efficient environmental policy: workhorse static models from environmental economics
  - Optimal pollution, abatement models, and instrument choice
  - Technological innovation and environmental policy
  - Uncertainty and instrument choice
2. Growth and Environmental Policy: dynamic models of growth and resource use
  - Scarcity of natural resources and growth
  - Environmental degradation, environmental policy and growth
3. Green accounting
  - Aggregate indicators of welfare and sustainability
  - Cost-benefit analysis

**Grade Determination and Final Examination Details:**

All students must comply with the regulations published in the University Calendar concerning “Intellectual Honesty,” “Examinations,” etc. Students will normally be evaluated in accordance with the marking scheme given below:

|                      |     |
|----------------------|-----|
| Assignments:         | 30% |
| Midterm Examination: | 30% |
| Final Examination:   | 40% |

All assignments must be handed in by all individuals in class, including anyone who is auditing or just sitting in for fun. In addition, please note: a passing grade on the assignments is a necessary condition for passing the course (i.e. obtaining a grade above F).

Assignments 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+ | 95-100  | B  | 74-76 | C- | 60-63 |
| A  | 87 - 94 | B- | 70-73 | D+ | 56-59 |
| A- | 82-86   | C+ | 67-69 | D  | 50-55 |
| B+ | 77-81   | C  | 64-66 | F  | <50   |

If, for some reason, the distribution of grades determined using the aforementioned conversion chart appears to be abnormal the instructor reserves the right to change the grade conversion chart if the instructor, *at the instructor's discretion*, feels it is necessary to more fairly represent student achievement.

Non-programmable calculators WILL NOT be allowed during the writing of tests or final examinations.

The final examination will be scheduled by the department and held in a classroom. The final exam will last 3 hours.

**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

\*\*\*\*\*

JAS/mi  
2007-10-25