

## Economics 487 (Environmental Economics)

Instructor:	Pamela Campa	Lecture Location:	MT 118
Phone:	403 220-4628	Lecture Days/Time:	TR 15:30 – 16:45
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Office:	SS 422		
Office Hours:	T 9:00 – 11:00 am, by appointment	Winter 2015	

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### What is this course about?

This course is about the impact of the economy on the environment, and how to regulate the economy so that economic and environmental goals are achieved. We start from the question: how can we make group environmental decisions starting from individual preferences? Then we introduce the concept of market failure in the production of desirable levels of pollution or of protection of natural world. Market failures call for government intervention, which is not failures-free itself, and therefore we will examine policy-making problems such as how much environmental protection to target, what kind of intervention to use among different environmental policies etc. We draw heavily from microeconomic theory, and when we study research papers we use basic econometrics.

### Textbook(s):

Charles D. Kolstad, *Environmental Economics, 2nd edition*. (Oxford University Press, 2010).

The textbook is intended as the main reading for the course. Although in the outline I will refer to entire chapters of the textbook, sometimes you will be required to read only portions of each chapter. In addition, we will discuss in class research papers from the environmental literature. These papers are marked with one asterisk in the list below, which means that they are supplemental materials. You can be tested for the portion of these readings that is included in the lecture slides. The list may change throughout the term, in which case I will make an announcement. All the readings and the lectures slides will be available in PDF on Blackboard, unless otherwise noted.

At the end of each lecture I will also suggest one or more short readings (policy article, newspaper article, blog entry) that will normally show us a “real-world” application of concepts and notions that we have studied throughout the lecture. At the beginning of the following class, I will ask who is interested in presenting to all of us in April any of the readings assigned in the previous lecture. Before the final exam you will also submit a short essay that will accompany the presentation, and a referee report for one of your colleagues’ essay. If more groups are interested in giving a presentation around the same topic, we will toss a coin. Ideally, by March 24th each of you will have selected a topic of interest.

Nathaniel O. Keohane and Sheila Olmstead, *Markets and the Environment*. (Island Press, 2007)

This book is a valuable resource if you are interested in furthering your understanding of the topics that we will cover during the course. I will occasionally use this book to prepare the lectures material, but you are not expected to own a copy of it.

**Book(s) on Reserve:**

**Desire2Learn:** This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at <http://d2l.ucalgary.ca> using or through their student centre. Please note that D2L features a class e-mail list that may be used to distribute course-related information. It is your responsibility to ensure that D2L uses the e-mail address of your choice. The default is your University of Calgary e-mail address.

**Course Outline:**

***Introduction***

1. Environment and Economics

Kolstad, Chapter 1

2. Social Choice: How Much Environmental Protection?

Kolstad, Chapter 3

***Section 1: Markets and Markets Failure***

3. Efficiency and Markets

Kolstad, Chapter 4

4. Market Failure: Public Goods, Public Bads, and Externalities

Kolstad, Chapter 5

\*Talyor, S. (2011). Buffalo Hunt: International Trade and the Virtual Extinction of the North American Bison. *American Economic Review*, 101.

\*Costello, C., Gaines, S. and Lynham, J. (2008). Can catch shares prevent fisheries collapse? *Science*, 321: 1678-1681

5. Benefit Cost Analysis

Kolstad, Chapter 6

\* M Greenstone, JA List, and C Syverson. 2012. The Effects of Environmental Regulation on the Competitiveness of U.S. Manufacturing, MIT Department of Economics Working Paper No. 12-24

\* Currie, Janet and Walker, Reed. 2011. Traffic Congestion and Infant Health: Evidence from E-ZPass. *American Economic Journal: Applied Economics*, 3(1): 65-90, 2011

6. Property Rights

Kolstad, Chapter 13

\* Fowlie, Meredith, Stephen P. Holland, and Erin T. Mansur (2012) What Do Emissions Markets Deliver and to Whom? Evidence from Southern California's NOx Trading Program. *American Economic Review*, 10(2).

**Section 2: Valuing the Environment**

7. Demand for Environmental Goods

Kolstad, Chapter 7

8. Hedonic Price Methods

Kolstad, Chapter 8

\* Bui, L. and C. Mayer (2003). Regulation and Capitalization of Environmental Amenities: Evidence from the Toxic Release Inventory in Massachusetts. *Review of Economics and Statistics* 85 (3).

\* Janet Currie, Lucas Davis, Michael Greenstone and Reed Walker (2013). Do Housing Prices Reflect Environmental Health Risks? Evidence from More than 1600 Toxic Plant Openings and Closings NBER Working Paper No. 18700.

\* Muehlenbachs, L., Spiller, B. and Timmins, C. The Housing Market Impacts of Shale Gas Development

**Section 3: Regulating Individuals and Firms**

9. Regulating Pollution

Kolstad, Chapter 11

\* Werner, Antweiler and Kathryn Harrison (2003). Toxic release inventories and green consumerism: empirical evidence from Canada. *Canadian Journal of Economics/Revue canadienne d'économie* Volume 36, Issue 2, pages 495–520.

\* Hamilton, J. (2005). Regulation through Revelation: the Origin, Politics, and Impacts of the Toxics Release Inventory Program. Introduction. *Cambridge University Press*.

\*Heal, G. (2008). When Principles Pay: Corporate Social Responsibility and the Bottom Line. Chapters 1, 2, 12, 13. *Columbia Business School Publishing*

\*Campa, Pamela (2013). Press and Toxic Leaks. Do Newspapers Reduce Toxic Emissions? *Mimeo University of Calgary*

## 10. Emission Prices and Fees

Kolstad, Chapter 12

### **Grade Determination and Final Examination Details:**

First Midterm Examination: 20%

Second Midterm Examination: 20%

One Home Assignments: 15%. Students may work on home assignments in pair. Late submissions are not accepted.

Essay, Presentation, Peer-Review and Class Participation: 15%. Students may work on presentation and essay in pair. The presentations will be given in the last two weeks of the course, and the essay will be submitted on April 15<sup>th</sup>. The presentation will be short (not more than 15 minutes each), and the essay should not exceed 5 pages. Ideally, the essay and the presentation will be based on but not limited to the readings that I assigned. You are invited and encouraged to do more research on the topic of the reading and to give a talk about it, as if you were giving a "Ted Talk"<sup>i</sup>

Final Exam: 30%

Tests and final exams 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 apply:

A+	95 – 100	B	73 – 76	C-	60 – 62
A	85 – 94	B-	70 – 72	D+	56 – 59
A-	80 – 84	C+	67 – 69	D	50 – 55
B+	77 – 79	C	63 – 66	F	0 – 49

A passing grade on any particular component of the course is not required for a student to pass the course as a whole.

Non-programmable calculators WILL be allowed during the writing of tests or final examinations.

There will be a Registrar scheduled final examination, held in a classroom, lasting 2 hours.

Tests and exams WILL NOT involve multiple choice questions.

**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.

All students must comply with the regulations published in the University Calendar concerning "Intellectual Honesty," "Examinations," etc.

Students who are unable to write the midterm or an assignment because of an illness, family emergency or religious observance will have the midterm weight shifted to the final examination. Documentation MUST be provided.

Students' Union Vice-President Academic:

Hana Kadri

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Society of Undergraduates in Economics (S.U.E.):

[www.ucalgary.ca/sue](http://www.ucalgary.ca/sue)

Society of Undergraduates in Economics is a student run organization whose main purpose is to assist undergraduate economics students succeed both academically and socially at the University of Calgary. Services include access to the exam bank, career partnerships with the Career Centre through hosting industry nights and information sessions, recognizing achievements in teaching, and organizing social events for members. They invite you to join by contacting [sue@ucalgary.ca](mailto:sue@ucalgary.ca).

*Faculty of Arts Program Advising and Student Information Resources*

- Have a question, but not sure where to start? The Arts Students' Centre is your information resource for everything in Arts! Drop in at SS102, call them at 403-220-3580 or email them at [artsads@ucalgary.ca](mailto:artsads@ucalgary.ca). You can also visit the Faculty of Arts website at <http://arts.ucalgary.ca/undergraduate> which has detailed information on common academic concerns.
- For program planning and advice, contact the Student Success Centre (formerly the Undergraduate programs Office) at 403-220-5881 or visit them on the 3<sup>rd</sup> Floor of the Taylor Family Digital Library.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at 403-210-ROCK [7625] or visit them in the MacKimmie Library Block.
- Online writing resources are available at <http://ucalgary.ca/ssc/writing-support/online-writing-resources>

Safewalk/Campus Security: 403 220 5333  
Emergency Assembly Point: Professional Faculties Food Court

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<sup>i</sup> If you don't know what a Ted Talk is, don't worry about it, we will watch one together in class, obviously on a topic related to Environmental Economics.