

**ECO 373Y****The Environment: Perspectives from Economics and Ecology****2009 - 2010**

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**Course Objectives**

Students will understand the basic principles of environmental economics and ecology and the interaction between ecological and economic factors. They will be able to assess the various alternative criteria and objectives for environmental policy and the problems associated with the implementation of environmental policy. Students will understand, through case studies, the practical nature of the policies designed to mitigate and reverse environmental damage.

Students will produce a research / analytical case study of a caliber expected of third year students. The case study will be ORIGINAL work of critical / independent thought, with conclusions supported by documented evidence.

**Course Website:** The course materials will be posted on Black Board. Regarding lecture material, only graphs, maps and tables will be posted on Black Board- **NOT** lecture notes.

**Required Texts**

Environmental Economics - Second Canadian Edition. Barry Field and Nancy Olewiler. McGraw – Hill Ryerson. 2005 {Referred to as FO}

Our Ecological Footprint- Reducing Human Impact on the Earth.  
Mathis Wakernagel, William Rees; New Society Publishers- 1996

**Additional Texts**

**Environmental and Natural Resource Economics (8th edition).**

Tom Tietenberg and L. Lewis; Addison-Wesley 2009. (Henceforth referred to as TT)

Economics of the Environment: Selected Readings, Fourth Edition, R. Stavins (editor) (henceforth RS)

## Grade Composition:

<b>Mid Term Test (January 21, 2010)</b>	<b>25%</b>
<b>Student Case Study</b>	<b>40%</b>
Proposal	1.5%
Annotated bibliography and library research quiz	1.5%
First draft	8%
Presentation of research findings	5%
Final paper	24%
<b>Final Examination</b>	<b>35%</b>

**Missed Tests:** In the event a student misses midterm test due to illness or domestic tragedy, the student must contact the Economics Departmental office, (Amber Shoebridge at 905 828-5257), and submit a doctor's note or the University's official "Student Medical Certificate" (available at: <http://www.utoronto.ca/health/forms/medcert.pdf>) indicating type of illness and date of illness (or other applicable documentation for domestic situations) to the Program Office within 1 week of the test date.

**Make-ups:** There will be a make-up test for the missed midterm in the last week of term (March 22-26).

**Re-marking:** If a student wants one or more questions on the midterm test re-marked, we reserve the right to re-mark other questions on the test as well.

**Academic Misconduct:** Students should note that copying, plagiarizing, or other forms of academic misconduct will not be tolerated. Any student caught engaging in such activities will be subject to academic discipline ranging from a mark of zero on the assignment, test or examination to dismissal from the university as outlined in the academic handbook. Any student abetting or otherwise assisting in such misconduct will also be subject to academic penalties. Please refer to the Code of Behaviour on Academic Matters

<http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>

Students agree that by taking this course all required papers may be subject to submission for textual similarity review to **Turnitin.com** for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

## Prerequisites:

Prerequisites are strictly checked and enforced and must be completed before taking a course. By taking this course you acknowledge that you will be removed from the course at anytime if you do not meet all requirements set by the Department of Economics. For further information you can consult the Undergraduate Academic Handbook which is found in the Economics Department Office, Kaneff Center Room 121. It can also be found in the 2007-2008 Courses Calendar which is available from the Registrar's Office.

## Lectures

2009

**September 10**                      **V. Aivazian / H. Shear**

Introduction    Course description; expectations.  
Property Rights, Externalities, and Environmental Problems  
FO Chapters 1, 2  
TT Chapters 1, 2 ,3

**September 17**                      **V. Aivazian**

Cropper and Oates Environmental Economics: A Survey. (RS Chapter 4)  
G. Hardin, The Tragedy of the Commons (RS Chapter 2)  
R. Coase,    The Problem of Social Cost (RS Chapter 3)  
V. Aivazian and J. Callen, The Core Transaction costs and the Coase Theorem. Constitutional Political Economy, 2003.

**September 24**                      **H. Shear**                      **Proposals for research paper due**

Concepts in Ecology: Some basic concepts dealing with the factors that govern life on Earth and environmental variables that are presently affecting the globe's biodiversity. The impact of humans on the Earth and the use that humans make of renewable resources.

**October 1**                              **H. Shear**                      **Library research quiz completed on Blackboard**

Concepts in Ecology: continued.

**October 8**                              **H. Shear**

*Special session with A Nicholson (Library) on "How to research for an Essay"*  
*Special session with T. Tokaryk (Academic Skills Centre) "How to Write an Essay"*

An overview of global freshwater issues

**October 15**                              **H. Shear**

Our Ecological Footprint- Reducing Human Impact on the Earth.  
Discussion of "Smart Growth". General concepts; examples throughout N America and Europe .

**October 22**                              **H. Shear**

The Great Lakes: A discussion of the history of the Great Lakes, and the impacts that humans have had on the Lakes. We will examine the policies and programs that have been put into place to deal with these impacts.

*State of the Great Lakes reports are available at [www.binational.net](http://www.binational.net)*

**October 29**                      **H. Shear**

Case study – The Great Lakes cont'd.

**November 5**                      **V. Aivazian**                      **Annotated bibliography due**

Regulating the Market: Information and Uncertainty  
FO Chapter 3, 4;      TT Chapter 4

**November 12**                      **V. Aivazian**

The Allocation of Depletable and Renewable Resources  
TT Chapters 5, 7  
R. Solow, Sustainability: An Economist's Perspective (RS Chapter 5)

**November 19**                      **V. Aivazian**

The Economics of Environmental Quality  
FO Chapter 5

**November 26**                      **V. Aivazian**

Benefit – Cost Analysis: A Framework  
FO Chapter 6;      FO Chapter 7,8

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**2010**

**January 7**                      **V. Aivazian**  
Criteria for evaluating environmental policies  
FO Chapter 9

**January 14**                      **V. Aivazian**  
Emission standards  
FO Chapter 11

**January 21**                      ***Mid Term Exam (2 hours)***

**January 28**

**V. Aivazian**

**First Draft of Term Paper Due**

Emission taxes and subsidies; transferable discharge permits  
FO Chapters 12 and 13  
Environmental policies in perspective; water pollution control policy  
FO Chapters 14 and 16

**February 4**

**V. Aivazian**

Recycling, Solid Waste Disposal and land Use.  
FO Chapter 19;  
Global Environmental Problems  
FO Chapter 20

**February 11**

**H. Shear**

Atmospheric Change: Global Warming; Ozone Depletion; Acid Rain; Toxic chemicals  
FO Chapter 20

***February 15***

***Drop date***

***February 16-19***

***Reading Week***

**February 25**

**H. Shear**

Case study: Waste management – solid and liquid waste management issues in Canada and globally.

**March 4**

**H. Shear**

Case study  
Natural Resource Management:  
Fisheries:  
Trends in global fisheries production and the human impacts and remedies being implemented to deal with these impacts.  
Forestry: Global forestry- a sustainable industry?

**March 11**

**H. Shear**

Environmental governance in Canada  
FO Chapter 15

**March 18**

**H. Shear**

Environmental governance in Canada- continued

International environmental agreements

FO Chapter 20;

Examples of global environmental issues: Aral Sea, Russia; Lake Chapala, Mexico; Lake Zapotlán, Mexico; Invasive species; biological diversity

**March 25**

**Student Presentations**

**April 1**

**Student Presentations - Last day of class**

**April 8**

**Research papers due**

### **Topics for the term paper case study**

- 1) Application of alternative mechanisms to achieve environmental objectives.
- 2) Achieving environmental and economic recovery in Hamilton Harbour.
- 3) The Ecological Footprint. An interesting academic exercise, but can it really be used?
- 4) Implications of climate change on Canada's economy and environment.
- 5) Achieving sustainability in Mexico's water resources.
- 6) Global water resources: issues facing humanity in the 21<sup>st</sup> Century

**Submission of a final research paper is mandatory. Students will NOT be allowed to sit the final exam unless they have submitted their final research paper.**

Students will select a topic in the first month of term. They will submit an electronic **proposal**.

Students will complete a **short exercise** from the library on library research.

Before submission of the **draft**, students will prepare an **annotated bibliography** on their topic.

They will prepare a paper of about **10,000 words** plus appropriate graphics on the topic. The format is **double spaced, double sided** in MS Word. The content will be based on original research and critical / independent thought of a calibre expected of third year students, considering principles from the text (s) and the selected readings. The paper will be evaluated on the basis of its originality, organization, economics / environment content as well as writing style and grammar.

A first draft of the paper is to be sent in electronically on **January 28, 2010**; the TA and / or instructors will provide feedback on each draft paper; the draft is also to be sent to Turn-it-In. This is to help the TA and the student to identify possible weaknesses in the draft BEFORE the final version is submitted.

**Each student will give a short Power Point presentation (10 minutes maximum) on his/her topic. This will count towards your class participation mark.**

There will be a **10% per day penalty** for late submission of **either or both** the draft and the final paper, unless the student provides an appropriate medical certificate.

The final paper is due on **April 8, 2010**. Final paper will be submitted in **BOTH** hard copy and electronic form (MS Word). Paper to be submitted to Turn-it-In as well.

**Schedule for research paper:**

Electronic submission of proposal- 1 page single spaced – **September 24, 2009**

Library quiz due– **October 1, 2009**

Annotated bibliography - **November 5, 2009**

Draft paper - **January 28, 2010** (electronic copy to TA and to Turn it In)

Final paper – **April 8, 2010** (electronic submission to Turn-it-In, and hard copy to ECO department).

**Each component of the paper as listed above MUST be submitted on time before the next one will be accepted.**

# HOW NOT TO PLAGIARIZE

*From the Code of Behaviour on Academic Matters:*

It shall be an offence for a student knowingly:

(d) to represent as one's own any idea or expression of an idea or work of another in any academic examination or term test or in connection with any other form of academic work, i.e. to commit plagiarism.

Wherever in the Code an offence is described as depending on “knowing”, the offence shall likewise be deemed to have been committed if the person ought reasonably to have known.

You've already heard the warnings about plagiarism. Obviously it's against the rules to buy essays or copy from your friends' homework, and it's also plagiarism to borrow passages from books or articles or websites without identifying them. You know that the purpose of any paper is to show your own thinking, not create a patchwork of borrowed ideas. But you may still be wondering how you're supposed to give proper references to all the reading you've done and all the ideas you've encountered.

The point of documenting sources in academic papers is not just to avoid unpleasant visits to the Dean's office, but to demonstrate that you know what is going on in your field of study. Get credit for having done your reading! Precise documentation is also a courtesy to your readers because it lets them look at the material you've found. That's especially important for Internet sources.

The different systems for typing up references are admittedly a nuisance. See the handout “Standard Documentation Formats” for an overview. But the real challenge is establishing the relationship of your thinking to the reading you've done. Here are some common questions and basic answers.

## **1. *Can't I avoid problems just by listing every source in the reference list?***

No, you need to integrate your acknowledgements into your own writing. Give the reference as soon as you've mentioned the idea you're using, not just at the end of the paragraph. It's often a good idea to name the authors (“X states” and “Y argues against X”) and then indicate your own stand (“A more inclusive perspective, however, . . .”). The examples on the next page demonstrate various wordings for doing this. Have a look at journal articles in your discipline to see how experts refer to their sources.

## **2. *If I put the ideas into my own words, do I still have to clog up my pages with all those names and numbers?***

Sorry—yes, you do. In academic papers, you need to keep mentioning authors and pages and dates to show how your ideas are related to those of the experts. It's sensible to use your own words because that saves space and lets you connect ideas smoothly. But whether you quote a passage directly in quotation marks, paraphrase it closely in your own words, or just summarize it rapidly, you need to identify the source then and there. (That applies to Internet sources too: you still need author and date as well as title and URL. The handout “Standard Documentation Formats” gives examples for a range of types.)

## **3. *But I didn't know anything about the subject until I started this paper. Do I have to give an acknowledgement for every point I make?***

You're safer to over-reference than to skimp. But you can cut down the clutter by recognizing that some ideas are “common knowledge” in the field—that is, taken for granted by people knowledgeable about the topic. Facts easily found in standard reference books are considered common knowledge: the date of the Armistice for World War I, for example, or the present population of Canada. You don't need to name a specific source for them, even if you learned them only when doing your research. They're easily verified and not likely to be controversial. In some disciplines, information covered in class lectures doesn't need

acknowledgement. Some interpretive ideas may also be so well accepted that you don't need to name a specific source: that Picasso is a distinguished modernist painter, for instance, or that smoking is harmful to health. Check with your professor or TA if you're in doubt whether a specific point is considered common knowledge in your field.

#### **4. *How can I tell what's my own idea and what has come from somebody else?***

Careful record-keeping helps. Always write down the author, title and publication information (including the URL and other identifying information for web pages) so you can attach names and dates to specific ideas. Taking good notes is also essential. Don't paste passages from online sources into your draft: that's asking for trouble. As you read any text—online or hard-copy—summarize useful points in your own words. If you record a distinctive phrase or sentence you might want to quote, put quotation marks around it in your notes to remind yourself that you're copying the author's exact words. And make a deliberate effort as you read to notice connections among ideas, especially contrasts and disagreements, and to jot down questions or thoughts of your own. If you find as you write that you're following one or two of your sources too closely, deliberately look back in your notes for other sources that take different views; then write about the differences and why they exist.

#### **5. *So what exactly do I have to document?***

With experience reading academic prose, you'll soon get used to the ways writers in your field refer to their sources. Here are the main times you should give acknowledgements, with examples showing different ways of working them into your own prose. (You'll notice many different documentation systems in the following examples; see the sheet "Standard Documentation Formats" for advice.)

##### **a. Quotations, paraphrases, or summaries:**

If you use the author's exact words, enclose them in quotation marks, or indent passages of more than four lines. But it's seldom worthwhile to use long quotations. In literary studies, quote a few words at a time and comment on them. In other disciplines, quote only when the original words are especially memorable. In most cases, use your own words to summarize the idea you want to discuss, emphasizing the points relevant to your argument. Be sure to document these paraphrases or summaries even when you are not using the exact original words. Mentioning the author's name indicates where the borrowing starts and stops and gains you some reflected glory for responding to the experts.

**e.g.** As Morris puts it in *The Human Zoo* (1983), "we can always be sure that today's daring innovation will be tomorrow's respectability" (p. 189). [APA system]

##### **b. Specific ideas used as evidence for your argument or interpretation:**

First consider whether the ideas you're mentioning are "common knowledge" according to the definition in point 3 above; if so, you may not need to give a reference. But when you're relying on ideas that might be disputed by people in your discipline, establish that they're trustworthy by referring to authoritative sources.

**e.g.** Other recent researchers (Jones, 2003) confirm the finding that drug treatment has little effect in the treatment of pancreatic pseudocysts. APA System

##### **c. Distinctive or authoritative ideas, whether you agree with them or not:**

The way you introduce the reference can indicate your attitude and lead into your own argument.

**e.g.** One writer (Von Daniken, 1970) even argues that the Great Pyramid was built for the practical purpose of guiding navigation. *[APA system]*

Prepared 17 June 2009 by Dr. Margaret Procter, University of Toronto Coordinator, Writing Support  
This handout is available online at [www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize](http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize).  
See also the list of advice files on academic writing at [www.writing.utoronto.ca/advice](http://www.writing.utoronto.ca/advice).

## STANDARD DOCUMENTATION FORMATS

Different disciplines use their own systems to give information about sources. Here are samples of the main systems, showing the kinds of information needed and some details of punctuation, typeface, and indentation. For more detailed advice, consult the manuals and websites mentioned below or use a general handbook such as Northey and Procter, *Writer's Choice* (available at the U of T Bookstore and in campus libraries at LB2369 N677).

**NOTE:** The examples here are single-spaced to fit on the sheet, but **academic papers should be double-spaced**.

### APA System: Parenthetical Author-Date References

The social sciences and many sciences emphasize the author and date. The *Publication Manual of the American Psychological Association* (2001) sets out detailed rules for one common system. A new version will be published in July 2009. See also [www.apastyle.org/electref.html](http://www.apastyle.org/electref.html) for updated advice on referencing Internet material. The APA system uses only initials for authors' given names, no quotation marks, no angle brackets for URLs, minimal capitalization for titles of books and articles, and italics for volume numbers as well as for journal titles. Strict APA format, as shown below, gives page numbers only for actual quotations, not for paraphrases or summaries. However, many instructors prefer a modified system that gives page numbers for all references. Ask your instructor whether to include page numbers.

A group of statisticians, for instance, has re-analysed published data and argued that the compound words claimed as inventions of one chimpanzee are the results of repeated random juxtapositions (Tannenbaum, Leung, Sudha, & White, 1996). Even more damagingly, Pinker (1994) summarizes the skepticism of various original researchers and observers about whether the signs produced in the Washoe project were really American Sign Language. His conclusion is that chimpanzees' abilities at "anything one would want to call language" are almost nil (p. 339). Experiments being conducted by Zelasko (2006) have so far failed to confirm the results originally claimed for chimpanzee learning of compound words.

#### References

Pinker, S. (1994). *The language instinct: How the mind creates language*. New York: Morrow.

Tannenbaum, R. V., Leung, K., Sudha, J. R., & White, M. A. (1996). A re-examination of the record: Pitty Sing's creation of compound words. *Journal of Biostatistics*, 9, 368-396.

Zelasko, J. (2006). Learning and teaching words: Guided language acquisition among chimpanzees. *American Psychologist*, 57, 750-765. Retrieved September 20, 2009, from <http://www.apa.org/journals/ap57/zelasko.html>.

## INTERNET SOURCES

To refer to online sources, follow your chosen system as far as possible. Give information about the author, the page title and the site title, the publication date, and the URL. Some systems (including MLA and APA) also ask you to state the date when you accessed the page. Including other information such as section title may help your reader find the exact item in a larger site. Note how publications in your field handle electronic sources. See the boxes above for examples of online sources in different systems. Here are further examples, set up to show some of the differences between entries for the same items in the MLA system (seventh edition, 2009) and the APA system (fifth edition, 2001).

**[e-mail: MLA system, item in Works Cited list]**

Paige Sills. <psills@mcmaster.ca>. "Did It Again!" Personal e-mail to Margaret Procter. 21 Sept. 2009.

**[e-mail: APA system, citation only in text: NOTE:** *In the APA system, personal communication like e-mail is not cited in the References list because it can't be consulted by other readers. Cite it only in your text, using parentheses to give author and date.*

Sills has recently indicated another success (P. Sills, personal communication, Sept. 21, 2009).

**[Web page: MLA system, item in Works Cited list] NOTE:** *This entry follows the MLA specification of giving both the date of publication or last update (31 Jan. 2008) and the date you accessed the web page (15 June 2009) It includes the URL.*

Procter, Margaret. "Writing an Effective Admissions Letter." *Writing at the University of Toronto*. 31 Jan. 2008. Web. 15 June 2009. <<http://www.utoronto.ca/writing/admiss.html>>.

**[Web page: APA system, item in References list]**

Procter, M. Writing an effective admissions letter. *Writing at the University of Toronto*. Retrieved June 15, 2009, from <http://www.utoronto.ca/writing/admiss.html>.

**[article in journal published only online: MLA system, item in Works Cited list]**

Hill, Robin. "What Sample Size Is 'Enough' in Internet Survey Research?" *Interpersonal Computing and Technology* 6:3-4 (July 1998): n. pag. Web. <<http://www.emoderators.com/ipct-j/1998/n3-4/hill.html>>. 11 July 2009.

**[article in journal published only online: APA system, item in References list]**

Hill, R. (July 1998). What sample size is "enough" in Internet survey research? *Interpersonal Computing and Technology*, 6:3-4. Retrieved July 11, 2009 from <http://www.emoderators.com/ipct-j/1998/n3-4/hill.html>.