

DEPARTMENT OF GEOGRAPHY  
University of Toronto  
COURSE OUTLINE

Winter 2010

COURSE: **GGR 314S - Global Warming**  
LOCATION & TIME: **ESC1050, Wed 3-6 + voluntary discussion groups to be arranged**

INSTRUCTOR: Danny Harvey; SSH 5032A  
Telephone: 978-1588  
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### **Outline**

A comprehensive treatment of the greenhouse gas/global warming issue and its relationship to other atmospheric environmental problems. See list of lecture topics on the reverse side.

### **Required Reading**

1-2 academic papers or a handful of 1-2 page news reports from the journals *Science*, *Nature*, and elsewhere are assigned as required reading during weeks without term tests, as well as selected chapters from my book, *Climate and Global Environmental Change*. To assist students in digesting the readings, a number of weekly voluntary discussion groups will be scheduled during which the readings can be discussed and debated. All of the required readings plus a complete set of lecture notes will be available for sale in class at the beginning of the first class, during subsequent classes, or at my office on MWF.

### **Requirements and Grade**

Students should devote 12 hours per week to attending lectures and a discussion group, and reading and reviewing the lecture notes and required readings. There will be specific questions about specific readings, worth 25% of the total mark, on each term test. I will be looking for logical, clear thinking, understanding of simple cause-effect relationships, and an appreciation of the linkages between related issues.

The breakdown of the marks will be:     3 75-minute term tests each worth 20 % of the final mark  
   A 2-hour final exam worth 40% of the final mark and covering  
   the entire course.

**The material to be covered on each midterm test is indicated in the outline on the other side of this page, and on the reading list.**

I expect all students to write the midterm exams except under the most severe and exceptional circumstances. I will not accept having a cold, a stomach ache, or headache, or something of that sort as a valid reason for not writing any midterm.

If, for some extraordinary reason, you do miss a midterm, please notify me within 24 hours of the exam by telephone or by email. You should get a reply by email confirming the day and time of the makeup within 2 days of the midterm. Makeup tests will be held no later than 1 week after the regularly scheduled tests and will be designed to be a little harder than the regular tests. A non-vague note from a doctor will be required.

## Format of Tests and Final Exam

The format of the term tests will be short-answer questions and 1- or 2-word-answer questions chosen from the menu of questions provided to class. 25% of the marks on each term test will be from questions about specific readings. The final exam will involve essay-style questions that require deeper thinking and synthesis, plus 1- or 2-word-answer questions from the same menu as for the term tests, and will cover the entire course. The final exam will not ask questions about specific readings, although marks will be awarded to students who refer to some of the readings in order to support their arguments. Marks will be deducted from term tests and the final exam for poor writing or improper English. Students registered in GGR314 should consult the iwrite website (<http://iwrite.utoronto.ca/login.php>) for GGR314 for examples and analyses of answers to a question on a past exam that obtained a wide range of marks (your student number serves as both your username and password, but access may not be possible until 2 weeks into the course).

## Return of Term Tests

Term tests can be picked up only in class. The final term test will be available to be picked up only on April 7<sup>th</sup> in Syd Smith Room 5064 between 12:00 and 2:00. Term tests not picked up then will be available for pickup only at the final exam, and if not picked up then, will be discarded.

## Discussion Groups

Discussion group meetings will begin during the 3<sup>rd</sup> week of class. The times of discussion groups will be finalized during the 1<sup>st</sup> week of class and chosen so that every student can make it to one of the discussion groups. Locations will be announced during the 2<sup>nd</sup> week of class and posted on my office door and on my homepage (given above).

## Emails

I welcome dialogue by email concerning the material in the course. However, I will delete without answering any emails asking me what is covered on the term tests or final exam, where the discussion groups are held, or asking to come to my office to pick up a term test. Include GGR314 in the subject line of your emails (this especially makes it easier to find your email later).

### **Outline of Lectures (with Chapters from Lecture Notes)**

<b>Date</b>	<b>1<sup>st</sup> Hour</b>	<b>2<sup>nd</sup> Hour</b>	<b>3<sup>rd</sup> Hour</b>
6 January	Introduction (Ch 1)	Introduction (Ch 1)	Introduction (Ch 1)
13 January	Introduction (Ch 1)	Economic Models (Ch 2)	Economic Models (Ch 2)
20 January	C Cycle Models (Ch 3)	C Cycle Models (Ch 3)	Climate Models (Ch 4)
27 January	Climate Models (Ch 4)	Climate Models (Ch 4)	Agricultural Impacts (Ch 5)
3 February	<b>First Term Test (3:15-4:45) – Covers Chapters 1-3 of lecture notes and associated readings</b>		
10 February	Agricultural Impacts (Ch 5)	Forestry Impacts (Ch 6)	Forestry Impacts (Ch 6)
24 February	Marine Impacts (Ch 7)	Water Resource Impacts (Ch 8)	Ecological Impacts (Ch 8)
3 March	Framework (Part III preamble)	Energy Efficiency (Ch 9)	Energy Efficiency (Ch 9)
10 March	<b>Second Term Test (3:15-4:45) – Covers Chapters 4-8 of lecture notes and associated readings</b>		
17 March	Renewable Energy (Ch 9)	Renewable Energy (Ch 9)	Hydrogen Economy (Ch 10)
24 March	Implementation (Ch 11)	Implementation (Ch 11)	Synthesis (Ch 12)
31 March	<b>Third Term Test (3:15-4:45) – Covers Part III Preamble + Chapters 9-11 of lecture notes,</b>		

	<b>related parts of Chapter 12, and all remaining readings</b>
7 April	3 <sup>rd</sup> term test available for pickup in Sid Smith Room 5064 between 12:00 and 2:00