

## EESD06H3 Climate Change Impact Assessment

### Course Description:

Climate change over the last 150 years is reviewed by examining the climate record using both direct measurements and proxy data. Projection of future climate is reviewed using the results of sophisticated climate modeling. The climate change impact assessment formalism is introduced and applied to several examples. Students will acquire practical experience in climate change impact assessment through case studies.

### Lecture List

- ▣ Jan 7 – Introduction, Climate Science I - Gough
- ▣ Jan 14 – Climate Science II - Gough
- ▣ Jan 21 – Climate Modelling and CCIA formalism - Gough
- ▣ Jan 28 – Canadian Climate Change Scenarios Network (CCCSN) - Gough
- ▣ Feb 4 – IPCC Process – M. Mirza
- ▣ Feb 11 –Downscaling Techniques – Gough
- ▣ Feb 25 – Midterm
- ▣ Mar 4 – CCIA Examples -Gough
- ▣ Mar 11 – Debates
- ▣ Mar 18 – Debates
- ▣ Mar 25 – Debates
- ▣ April 1 – Debates

### Evaluation

Assignments (3)	30%
Participation	10%
Midterm	25%
Debate	35%

Midterm (2 hours) will occur in class on February 25.

No text book has been assigned to this course. All lectures with supplementary (explanatory) material will be posted on the course Blackboard site.

## EESD06H - Climatic Change Impact Assessment

Room: MW229  
Lecture: M 2-3 (MW 229)  
Tutorial: M 1-2 (MW 229), M 3-4 (MW 262)

### ***Instructor:***

Prof. W. Gough  
Office: S652  
Phone: 287-7245  
E-mail: [gough@scar.utoronto.ca](mailto:gough@scar.utoronto.ca)  
Web page: [www.scar.utoronto.ca/~gough](http://www.scar.utoronto.ca/~gough)

### ***Course Description:***

The course begins with an overview of the earth's climate over the last 5 billion years. How the climate record is constructed and theories of climate change are reviewed. The climate system and climate models are then presented. The potential impacts of anthropogenic change are explored using climate change impact assessment analysis.

Course text book: Global Warming, The Hard Science by L.D.D. Harvey

Reference texts: First Lecture notes

All lectures will be posted on the course Intranet page.

### ***Course Evaluation:***

Assignments (2): 20%

Debate: 20%

Presentation: 15%

Participation: 15%

Final: 30%

### ***Assignment Schedule***

Assignment	Assigned	Due	Returned
1	January 24	February 21	February 28
2	Feb. 21	March 7	March 14

The debates will occur on Feb. 7, 2005 and Feb. 21, 2005

### **Tutorials**

Tutorial sessions will be held on Jan. 17, 24, 31; Feb. 28 and March 7. The class will be broken into two groups, one group meeting from 1 to 2, the other from 3 to 4.

### **Tentative Lecture Schedule**

Jan. 10	Introduction, Review of the Earth's Climate
Jan. 17	Climate Change I – The Physics
Jan. 24	Climate Change II - Modelling
Jan. 31	Climate Change III - The Arctic
Feb. 7	CCIA - Basics
Feb. 14	Reading Week
Feb. 21	CCIA – Examples
Feb. 28	Debate I
Mar. 7	Debate II
Mar. 14	Student Presentation
Mar. 21	Student Presentation
Mar. 28	Student Presentation
Apr. 4	Student Presentation

### **Participation**

10 marks for participation for tutorials on Jan. 17, 24, 31 and Feb. 28 and March 7. 5 marks for participation in debates (as an audience member) and student presentations (as an audience member).