

## EESD06H3: Climate Change Impact Assessment

### Instructor Information:

Tanzina Mohsin

Office: S649B, Phone: 416-287-7245

E-mail: [tanzina.mohsin@utoronto.ca](mailto:tanzina.mohsin@utoronto.ca)

Office hours: Thursday, 9:30 to 12:30 pm (January 26 to April 20)

Appointments can be made by email on any day except Friday

Course Webpage is on the Blackboard:

- PowerPoint presentations
- Announcements

### 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.

### Skills:

You have to have skill in the general use of computers and spreadsheet use. You need this to assemble and transfer various data files. Basic mathematical skills are required: simple arithmetic, algebraic notation, order of operations, to note a few. You will learn the practical skill of analyzing climate data and its application to Climate Change Impact Assessments. You will also develop the thinking skill of using Climate Change information to CCIA.

### Attitudes:

First, *active participation* in reading, asking questions and exploring topic material. Secondly, the *independence* to develop your own writing style, and present your own original work. Thirdly, an air of *skeptical assessment* such that if good results are obtained, you say so, but you also show an awareness of the limitations.

### Lecture Topics (tentative)

- ▣ Jan 13 – Introduction, Climate Science I - Mohsin
- ▣ Jan 20 – Climate Science II - Mohsin
- ▣ Jan 27 – Climate Modelling and CCIA formalism - Mohsin
- ▣ Feb 3 – Canadian Climate Change Scenarios Network (CCCSN) - Mohsin
- ▣ Feb 10 – IPCC Process – M. Mirza

- ▣ Feb 17 –Downscaling Techniques – Mohsin
- ▣ Feb 24 – Reading Week
- ▣ Mar 3 – Midterm
- ▣ Mar 10 – Statistical Downscaling- Mohsin
- ▣ Mar 17 – CCIA Examples -Mohsin
- ▣ Mar 24 – Applied Climatology - Mohsin
- ▣ Mar 31 – Debates
- ▣ April 7 – Debates

**Tutorials:**

Time and place to be announced

**Evaluation:**

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

Midterm (2 hours) will occur in class on MARCH 3.  
Detail of the debates will be discussed in class.

**Text Book:**

Although no text book has been assigned to this course, the following readings are recommended, which will be helpful to understand the course materials. .

**Suggested Readings**

Global Warming, The Hard Science (2000) by L.D.D. Harvey  
Climate Change 2007, The Physical Science Basis (IPCC Report, Fourth Assessment)  
Climate Change 2007, Impacts, Adaptations and Vulnerability (IPCC Report)

All lectures with supplementary (explanatory) material will be posted on the course Blackboard site.

**Missed Work:**

- A penalty of 10% per day for any late assignment
- Be wary of fine line between working together and plagiarizing
- Medical documentation is needed if you miss the midterm test