EESD06H3: Climate Change Impact Assessment

Instructor Information:

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Office hours: Thursday, 10:30 am to 12:30 pm (January 16 to April 3)

Appointments can be made by email on any day except Friday

Lectures and Tutorials:
Thursday between 1 to 3 pm and Tutorials between 3 to 4 pm (BV469)

Tutorials start January 23

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 problem solving and critical 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.

Schedule- Lecture Topics (tentative):

- ☒ Jan 9 – Introduction, Climate Science I
- ☒ Jan 16 – Climate Science II

- ▣ Jan 23 – Canadian Climate Change Scenarios Network (CCCSN)
- ▣ Jan 30 – Climate Modelling and CCIA formalism
- ▣ Feb 6 – IPCC Process
- ▣ Feb 13 –Downscaling Techniques
- ▣ Feb 20– Reading Week
- ▣ Feb 27 (tentative) – Midterm (must not miss the test as there is usually no makeup)
- ▣ Mar 6 – Statistical Downscaling
- ▣ Mar 13 – Debates as final exam
- ▣ Mar 20 – Debates as final exam
- ▣ Mar 27 – Debates as final exam
- ▣ April 3 – Debates as final exam

Grading Scheme:

Assignments (3)	25%
Participation	10% (attendance + response writing+ participation in debate)
Midterm	30%
Debate	35%

Midterm (2 hours) will occur in class on February 27 which is tentative due to room availability.
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 2013, 2007, The Physical Science Basis (IPCC Report, Fifth and 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 the fine line between working together and plagiarizing
- Medical documentation is needed if you require an extension due to sickness