

# **GEOG 431/831 Syllabus, Winter 2019**

## **Instructor:**

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## **Office hours:**

Dr. Sauchyn is always accessible via the course e-mail and forum at the course web site

## **Calendar Description**

This course focuses on the science of climate change and its impacts on natural and social systems, and how this science informs the adaptation of public policy and management practices to minimize the adverse impacts of climate change. The course is intended for advanced undergraduates and graduate students with an interest in this emerging field of study.

## **Readings**

There is no required text. All of the readings for this course are available through links in the “Recommended Readings” sections of each Unit.

## **Lectures and Class Schedule**

There are no set time for class activities. Below is the recommended pace for the class and the topics and expectations for each week: lectures, readings, assigned forum postings and essay assignments.

<b>Unit</b>	<b>Topic</b>	<b>Dates</b>
1.0	Why we Study Climate Change	Jan 8-12
2.1	Climate Processes and Feedbacks	Jan 13-19
2.2	Natural and Human-induced Climate Variations	Jan 20-26
2.3	Past Climate	Jan 27-Feb 2
3.1	Introduction to understanding vulnerability	Feb 3-9
3.2	Adaptation Characteristics and Processes	Feb 10-16
4.1	Introduction to Scenarios and Scenario Types	Feb 17-28
4.2	Climate Change Scenario Construction and Application	Mar 1-7

4.3	Obtaining Finer Resolution Scenarios	Mar 8-14
5.1	Assessing Impacts and Vulnerabilities	Mar 15-20
6.1	Global and National Impacts of Climate Change	Mar 21-26
6.2	Terrestrial Ecosystems and Soil Landscapes	Mar 27-Apr 1
6.3	Agriculture	Apr 2-6
6.4	Water Resources	Apr 7-11

<b>Assignment</b>	<b>Percentage of Total Mark</b>	<b>Due Date</b>	<b>Expect Comments &amp; Mark by</b>
<u>Forum Postings</u>			
Unit 1	5%	Jan 14	Jan 21
Unit 2.2	5%	Jan 28	Feb 04
Unit 2.3	5%	Feb 04	Feb 11
Unit 3.2	5%	Feb 15	Feb 25
Unit 4.2	5%	Mar 05	Mar 12
Unit 6.1	5%	Mar 21	Mar 28
Unit 6.4	0%	Apr 09	Apr 16
<u>Essays</u>			
Unit 2.1	5%	Jan 21	Jan 27
Unit 2.3	5%	Feb 08	Feb 15
Unit 4.1	5%	Feb 27	Mar 06
Unit 4.3	5%	Mar 12	Mar 19
Unit 6.2	5%	Mar 28	Apr 05
Unit 6.3	5%	Apr 03	Apr 10
<b>Term Paper Project</b>	40%	Apr 12	Apr 24
<b>TOTAL</b>	<b>100%</b>		

## Assessment of Essays and Term Paper:

There are six essay assignments and one major term paper. The due dates are given above and on the course calendar. Before mid-semester, each student should provide an outline and description of their term paper project. The essays and term papers will be judged using similar criteria as outlined below:

### Assessment Rubric – Essays and Term Paper

Criteria	1. Below Average (Less than 5/10)	2. Average 5-6/10	3. Above Average 7-8/10	4. Superior 9-10/10
<b>A.</b> A statement of purpose/objectives, problem (1 marks)	No clear statement of purpose, objectives or problem.	Attempt to provide an overview of the project, but objectives are not explicit.	Explicit statement of purpose, objectives or problem.	Very clear overview and strong statement of purpose, objectives or problem.
<b>B.</b> Technical accuracy (3 marks)	Technical accuracy is lacking with repeated instances of statements that are inaccurate.	Some technical accuracy is lacking.	Information is technically accurate.	Information is technically accurate and an understanding to the technical details is apparent.
<b>C.</b> Organization, grammar, spelling (2 marks)	Poorly organized – for example, poor or no use of heading – plus grammatical and spelling errors.	Fairly well organized but some weaknesses in the presentation – for example redundancy or use of unnecessary phrases.	Well organized, with few grammatical errors and redundant phrases.	A clear concise and well organized presentation. Apparent that the text has been edited several times.
<b>D.</b> Use of sources, referencing (1 marks)	Sources not given or properly referenced.	References cited but not in every case where existing material is used.	Sources are properly referenced.	A thorough use and proper referencing of sources.
<b>E.</b> Use of illustrations and examples (1 mark)	No illustrations or examples.	Some illustrations or examples but not used effectively.	Good use of illustrations and examples.	Very good use of clearly presented illustration and examples.
<b>F.</b> Achieving the purpose/objectives (2 marks)	Purpose or objectives (if stated) were not achieved.	Stated purpose or objectives were partly achieved.	Stated purpose or objectives were mostly achieved.	Stated purpose or objectives were achieved

## **Forum Postings**

Each Unit of the course, except Unit 5, requires that you post assignments to the Forum. “Postings” refer to Forum entries. They will be based on information from readings and web sites and responses to other students’ postings. The posting of a forum assignments does not mean an end to discussion on that topic. When the due date is past for posting the assignment, that folder will be locked, but during the following week, short responses to other students’ postings should be submitted using the topic “Responses to Forum Postings”.

## **Evaluation of Forum Postings**

This work, worth 30% of your final grade, is due at regular intervals throughout the semester as indicated above and on the course calendar. Forum postings will be assessed as follows:

Marks will **not** be assigned based on how many times you post to the Discussions Board. Rather I am looking for thoughtful, analytical postings that encourage others to participate and interact – for example by posing questions for further discussion. I want evidence that you read and thought about the assigned material and the postings of your classmates, and are not simply stating your own point of view. Not every entry will have the following features, but over the entire course, I would expect to see evidence of the following. Higher marks will be assigned to postings that:

1. reflect the readings/topics for discussion
2. are well thought out and analytical in nature
3. enable others to participate in the discussion of the topic
4. ask questions of others or respond to questions asked
5. do not simply agree with the opinions of others without justification
6. extend what others have written about, and
7. provide a new idea, a new way of thinking about the concept.

In addition, the discussion of postings may also be used to share websites, graphics, or on-line readings related to course content. The following scheme will be used as a marking guide:

## Assessment Rubric - Forum Postings

<b>1. Below Average (less than 5/10)</b>	<b>2. Average 5-6/10</b>	<b>3. Above Average 7-8/10</b>	<b>4. Superior 9-10/10</b>
Basically nothing posted; minimal content; little evidence of having read the required readings.	Postings address readings, giving evidence of having done some preparation; some responses given to the postings of others.	In addition to #2, some attempt to invite response, to provide a critical analysis of the topic, and to respond to the postings of the other students.	In addition to #3, critique the work and extrapolate the main ideas, that is, create original ideas about the topic, taking a risk, being controversial—with justification.