

GEOG3350b – Climate Change: Past and Future Course Outline: Section 001 Winter 2024

This course includes in-person lessons and online asynchronous materials.

1. Course Information

Delivery Mode	In person and asynchronous online
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Classes Start	Spring Reading Week	Classes End	Study day(s)	Exam Period		
January 8	February 19-23	April 8	April 9 & 10	April 11-30		

January 16, 2024: Last day to add a second-term half course

February 19, 2024: Family Day

March 7, 2024: Last day to drop a first term half course without penalty



Course Instructor	Contact Information
Dr. Beth Hundey	GEO 3350b Teams Channel
(Please call me Beth or Dr. Hundey)	beth.hundey@uwo.ca

Teaching Assistant	Contact Information
Reforce Okwei	GEO 3350b Teams Channel
	rokwei@uwo.ca

Office Hours:

Dr. Hundey: Wednesdays: 6:45 - 7:45 pm, Microsoft Teams or In-Person. Come with your questions or just to chat. Join as a group or come on your own. If this timing doesn't work for you, send a MS Teams message to set up an alternate time.

- To chat In-Person, let me know you'd like to discuss something after class in most cases we will be able to chat in our classroom as we are the last class of the day.
- To chat on-line, use Teams channel to send me a message during the office hour letting me know you're ready to chat.

Reforce Okwei (TA): Will post office hours during and following the lab weeks.

2. Calendar Description

Learn about the lessons Earth's past climate holds for future climate change. Students are introduced to methods of paleoclimatology, past environmental changes and their impacts on early societies, and future climate change including models, international agreements, climate and graphical literacy in the media, and strategies for reaching climate goals.

2 lecture hours, 2 lab hours 0.5 course

Antirequisite(s): None

Prerequisite(s): One of Geography 2310A/B, Geography 2320A/B or Geography 2330A/B, or at least 3rd year standing in an Environmental Science or Earth Sciences program.

Prerequisite checking is the student's responsibility

Senate Regulations state, "unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you will be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites."

3. Program Learning Outcomes

Students will make progress towards the following Geography program learning outcomes:

- Develop knowledge and critical understanding of the fundamental characteristics, processes, temporal changes and landscapes of social and biophysical systems and their interactions.
- Demonstrate informed awareness of geographical diversity through knowledge of different places and understanding of the processes that shape them spatially and over time.
- Combine breadth of knowledge of Geography with specialized understanding in selected sub-fields.
- Synthesize and evaluate geographical information from diverse sources, including geospatial data.
- Collect, analyze and interpret geographical and geo-spatial data in relation to social and biophysical systems
- Describe, explain, analyze and interpret a range of geographical phenomena outside the classroom by engagement with people, places and environments
- Analyze real-world problems and policy applications using geographical concepts, skills and understanding.
- Communicate geographic ideas and understanding effectively to a variety of audiences in writing, orally, and graphically



4. Textbook



All resources will be posted in OWL in place of a textbook – there is no required textbook.

Some students will be asked to buy a large bag of M&Ms. Yes, this is real. It has to be a big bag too, and ideally the flat ones (so not the caramel or peanut ones, even the peanut butter ones are a bit too roll-y). Generally I'm not a stickler for brands, but they really need to have an M on them otherwise you'll be stuck in an infinite loop. You can buy them ahead of time knowing you're going to be asked to use them in February, but I can't be held responsible if you eat them before we need them.

5. Course Objectives and Format

Upon successful completion of this course, students will be able to:

- Outline a skeleton environmental change research proposal incorporating appropriate methods, records, and techniques, both in groups and independently.
- Communicate environmental change research to specialist (at the level of classmates) and non-specialist audiences in both written and oral formats.
- Critique popular media with a particular focus on climate science.
- Articulate natural and anthropogenic agents of environmental change, and explain similarities and differences between environmental changes today and in the past.
- Explain social aspects of environmental change, including vulnerability of populations, examples of mitigation, adaptation and personal responsibility.
- Independently interpret and explain key climate science figures, graphs, and maps.
- Set academic goals, assessing progress, identifying areas for growth, self-reflect, and communicating effectively with peers.



This course will be a combination of in person and online asynchronous engagement. On occasion synchronous online approaches may be used (students will be notified via announcements).

Asynchronous online course material will be posted to OWL: http://owl.uwo.ca. Any changes will be indicated on the OWL site and discussed with the class.

<u>Google Chrome</u> or <u>Mozilla Firefox</u> are the preferred browsers to optimally use OWL; update your browsers frequently. Students interested in evaluating their internet speed, please click <u>here</u>.

If students need assistance, they can seek support on the <u>OWL Help page</u>. Alternatively, they can contact the <u>Western Technology Services Helpdesk</u>. They can be contacted by phone at 519-661-3800 or ext. 83800.

6. Course Content and Schedule

See the OWL site content pages and calendar for which classes are synchronous (online or in person) and asynchronous.

Week	Dates	Topic	Activity/ Deadlines
1	January 8,10	Why study	Participation and
		environmental change?	Professionalism Reflection
			Activity
2	Jan 15,17	Earth's Climate Today. A	Quiz
		habitable planet.	
		Greenhouse effect	
3	Jan 21,23	Internal interactions.	Lab work period
		Instrumental records,	
		challenges, solutions	
4	Jan 29, Jan 31	Dating methods.	Lab work period
		Relative dating.	Archive presentation
		Absolute dating.	preparation
			Quiz
5	Feb 5,7	Environmental Change	Lab assignment due
		Methods	Archive presentation
			preparation.
6	Feb 12,14	Environmental Change	Archive presentation
		Methods II	preparation and fact sheets
			due.
	Feb 19-23	Reading Week	N/A
7	Feb 26,Feb 28	Research proposal	Quiz
		activity	
		Team teaching IPCC	
		Special Report on 1.5	
		degrees	
8	Mar 4,6	UN Climate Negotiations	
9	Mar 11,13	Debrief Climate	Quiz
		Simulation	Project plan/ annotated
		Earth's history and	bibliographies due.
		climate.	
10	Mar 18,20	Fake News	
		The Last Glacial	
		Maximum.	
11	Mar 25,27	Early humans,	Quiz
		civilizations, and climate	
12	Apr 1,3	In-class and on-line	Passion Projects Due
		showcases	
13	Apr 8	Review	

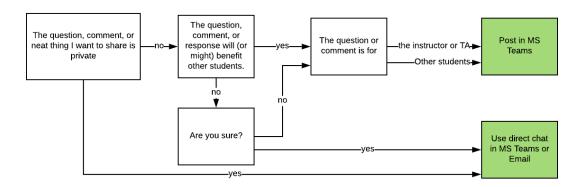


7. Communication



Communicating with fellow students and the instructors

We aim to create an equitable learning community, and communication is an important part of that. Use the MS Teams Channel to communicate about the course with the instructors and with each other. If you see a question in Teams that you can answer, we encourage you to do so! In this way, we can get to your question more quickly, and your classmates will also have a chance to learn from your question. Aim to check MS Teams 2 times a week. If your question or comment is private in nature, use direct chat in MS Teams or email from your centrally administered UWO email account.



Reminders and updates from the Instructor

- Weekly activities will be posted by end of day Sunday each week, including a weekly video update.
- Always check the "Prepare for Week X" lesson at the end of each week.
- Reminders will be posted on MS Teams, but any critical or new information will also be included on the OWL site.
- Students will receive a response within 48 hours on weekdays.

Participation, engagement, and classroom culture of participation

• This upper-level course requires active participation from students, both for assessment, and to enhance the learning experience of the entire class. Active learning benefits students by supporting higher-level learning and improves retention of material (M.J. Prince, 2004). Participation will be graded, and there are formal and informal expectations of involvement. Please come to class prepared to be involved and to be respectful to your classmates and the instructor team. Derogatory or offensive remarks and responses are not acceptable, nor are they effective forms of academic discussion or debate.

8. Evaluation

Below is the evaluation breakdown for the course. Any deviations will be communicated.

Assessment	Format	Percent	Due Date			
		of grade				
Lab Assignment	Report with written answers,	10%	Feb 5			
	graphs, and calculations. Two lab					
	work periods will be given.					
Archives/	In groups, students are required	10%	Feb 14			
Techniques	to prepare a presentation and a					
Presentation	fact sheet. Students choose from					
	a list of topics.					
Communication	Students will choose from 3	15%	Deadlines vary, up			
project	options for the communication		to Mar 20			
	project.					
Quizzes	Students will complete a quiz on	10%	Jan 17, Jan 31, Feb			
	owl on Mondays. Quiz is open 24		26, Mar 11, Mar 25			
	hours; you have one hour in the					
	24-hour period to write the quiz					
	(until 11:55 pm). A student's quiz					
	grade will be based on their top 4					
	quiz marks (drop lowest).					
Passion projects	Consists of 3 individually graded	15%	Project plan due:			
	components: a project plan		Mar 13			
	included annotated bibliography,					
	the project, and the showcase. All		Showcase: Apr 1,3			
	students should be prepared to					
	provide a 3-minute oral summary					
	of their project and can expect to					
	answer questions.					
Professionalism	Determined by self-assessment	15%	Ongoing			
and participation	with adjustment and approval by					
	the instructor team. Class					
	attendance is critical for					
	participation grades and					
	attendance will be taken. Each					
	student will have 3 class passes,					
	no questions asked, but these do					
	not apply to presentation days					
Take-home exam	An assignment to demonstrate	25%	Due Date TBD			
	the skills and knowledge you have					
	gained throughout the course.					

The evaluation methods described in the course outline are essential requirements for the course.



and materials from the OWL site.

All assignments are due at 11:55 pm EST unless otherwise specified

Written assignments will be submitted to Turnitin (statement in policies below)

Rubrics will be used to evaluate assessments and will be posted with the instructions

After an assessment is returned, students should wait 24 hours to digest feedback before contacting their evaluator; to ensure a timely response, reach out within 7 days.

Students are responsible for material covered in the lectures as well as the assigned readings

Click <u>here</u> for a detailed and comprehensive set of policies and regulations concerning examinations and grading. The table below outlines the University-wide grade descriptors.

A+	90-100	One could scarcely expect better from a student at this level
Α	80-89	Superior work which is clearly above average
В	70-79	Good work, meeting all requirements, and eminently satisfactory
С	60-69	Competent work, meeting requirements
D	50-59	Fair work, minimally acceptable
F	below 50	Fail

Information about late or missed evaluations:

\boxtimes	Late assessments without illness self-reports will be subject to a late penalty 5 %/day. A
	student may seek flexibility on a deadline, however should not submit any documentation
	to either the instructor or the TA.

X	Quizzes cannot be submitted late - however, because the top 4 quiz marks count,	a student
	may miss one quiz without penalty.	

\boxtimes	Late	assessn	nents	<u>with</u>	illness	self-rep	orts	should	be	submit	ted	within	7	days	of the	e
	assigi	nment d	lue da	te. Ar	n assess	sment ca	annot	t be sul	bmit	ted afte	er it	has be	en	returi	ned to	0
	the cl	lass; an	alterna	ate as	ssessme	ent will k	oe ass	signed.								

Grades <u>will not be adjusted</u> on the basis of need. It is important to monitor your performance in the course. Remember: *You* are responsible for your grades in this course.

9. Accommodation Policies

Students with disabilities work with Accessible Education (formerly SSD) which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The accommodation policy can be found here: Academic Accommodation for Students with Disabilities.

The University recognizes that a student's ability to meet their academic responsibilities may, on occasion, be impaired by medical illness. Illness may be acute (short term), or it may be chronic (long term), or chronic with acute episodes. The University further recognizes that medical situations are deeply personal and respects the need for privacy and confidentiality in these matters. However, in order to ensure fairness and consistency for all students, academic accommodation for work representing 10% or more of the student's overall grade in the course

shall be granted only in those cases where there is documentation indicating that the student was seriously affected by illness and could not reasonably be expected to meet their academic responsibilities.

Policy on Academic Consideration for Medical Illness - Undergraduate Students

Student Medical Certificate (SMC)

Religious Accommodation

Students should consult the University's list of recognized religious holidays, and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the Western Multicultural Calendar.

10. Make-up Examinations

Make-up exams are rare in this course because the exam is take-home and multiple days are given to complete it.

Make-up exams will be granted with approved documentation only. All documentation for missed exams must be provided to the Academic Counselling Office within 48 hours of the scheduled exam, otherwise the instructor will assign a grade of zero.

The format and content of make-ups may differ substantially from the scheduled test or examination.

11. Use of Electronic Devices

Electronic devices are allowed for tests.

12. How to Be Successful in this Class:

Students enrolled in this class should understand the level of autonomy and self-discipline required to be successful.

- 1. Invest in a planner or application to keep track of your courses. Populate all your deadlines at the start of the term and schedule time at the start of each week to get organized and manage your time.
- 2. Make it a daily habit to log onto OWL to ensure you have seen everything posted to help you succeed in this class.
- 3. Follow weekly checklists created on OWL or create your own to help you stay on track.
- 4. Take notes as you go through the lesson material. Keeping handwritten notes or even notes on a regular Word document will help you learn more effectively.
- 5. Connect with others. Try forming a study group and try meeting on a weekly basis for study and peer support.
- 6. Do not be afraid to ask questions. If you are struggling with a topic, check the online discussion boards or contact your instructor(s) and or teaching assistant(s).
- 7. Reward yourself for successes. It seems easier to motivate ourselves knowing that there is something waiting for us at the end of the task.



13. Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a <u>Scholastic Offence</u>.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

14. Western's Commitment to Accessibility

The Department of Geography and Environment strives at all times to provide accessibility to all faculty, staff, students and visitors in a way that respects the dignity and independence of people with disabilities.

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 519-661-2147 for any specific question regarding an accommodation. <u>Information regarding accommodation of exams</u> is available on the Registrar's website.

More information about <u>"Accessibility at Western"</u> is available.

15. Mental Health

If you or someone you know is experiencing distress, there are several resources here at Western to assist you. Please visit Western's <u>Health and Wellness website</u> for more information on mental health resources.

16. Support Services

Western's Support Services
Student Development Centre

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

17. Important Dates

Monday January 8: Classes resume

Tuesday January 16: Last day to add a second term half course Monday February 19: Family Day – Department Office Closed February 17 to February 25: Spring Reading Week (No classes; Department Office open) Thursday March 7: Last day to drop a second term half course without academic penalty Friday March 29: Good Friday – Department Office Closed

Monday April 8: Classes end April 9 and 10: Study days April 11-30: Examination Period