

## Global Environmental Systems, GEOG1010

Carleton University  
Department of Geography & Environmental Studies  
Summer 2021

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Virtual Office Hours: Wednesday (1:00pm-2:00pm) or by appointment

Virtual Office Hours Zoom Link: <https://zoom.us/j/99445939783>

### **INTRODUCTION**

This course introduces you to the study of meteorology, climatology, hydrology, geomorphology, biogeography, and soils. **Meteorology** is study of weather (weather is the state of the atmosphere at a specific time and place). **Climatology** is the study of climate (average weather). **Hydrology** is the study of the movement and distribution of water throughout the Earth, and addresses both the hydrologic cycle and water resources. **Geomorphology** is the study of landforms and the processes that shape them. **Biogeography** is the study of the spatial distribution of plants and animals and the reasons behind the observed distribution. The objectives of the course are to give you an overview of the physical environment surrounding you, and to prepare you for more advanced courses in this subject. The topics in this course are important to students interested in the biophysical sciences and to students who wish to understand the processes underlying many human, social and economic aspects of our environment and natural resources.

### **COURSE FORMAT AND TECHNOLOGICAL REQUIREMENTS**

Asynchronous delivery - All course content (lectures, labs, quizzes, and exams) is presented online. Students are expected to spend at least 10 to 12 hours per week watching the recorded lectures, answering lecture interactive questions, and completing the weekly lab assignment.

For best online learning experience, Carleton's ITS recommends the following minimum technical requirements: Windows 10 or macOS 10.15 operating system; Google Chrome, Firefox, and/or Edge web browser; Intel Core i5 based model processor; 4GB Ram/Memory; minimum 5 GB available storage; 1-24x768 screens resolution; WiFi or Ethernet; available USB port(s) to accommodate recommended accessories; antivirus; high speed internet; and speakers, microphone or headphones, Video Camera, Keyboard. More details can be found on this link <https://carleton.ca/its/help-centre/faq-technical-specs-for-new-students/>.

Lab exercise 5 requires the use of Google Earth Pro (Free). Available for Windows, macOS and Linux – check the following link for system requirements and installation instructions:

<https://support.google.com/earth/answer/21955?hl=en>

### **RECOMMENDED TEXTBOOK**

Leaver, D. 2018 HOW THE EARTH WORKS: A Simplified View of Our Complex Planet. Open access textbook available cuLearn course page. © Text Copyright Darren Leaver 2018.

### **COURSE TEACHING ASSISTANTS**

Check cuLearn for TA contact information and virtual office hours.

## **SCHEDULE**

GEOG1010 is an early summer course that starts on May 6 2021 and ends on June 18 2021. The final exam will be scheduled during the early summer exam period as set by Carleton University. Each week we are supposed to cover content equivalent to what we cover over two weeks in a Fall/Winter term. The weekly work completed in this class is equivalent to two 3hr lectures and two 2hr lab sessions.

**Lectures:** There are six topics in this course. Each topic extends over a week period and contains a series of 10-12 recorded short lectures (20-30min each). These are interactive lectures that prompt students to answer questions while watching the recordings. Most of short lectures will have 2-3 interactive questions that allows you to test your acquired knowledge. Students are expected to complete the recorded lectures on their own but it's highly recommended to follow the proposed completion dates.

**Lab sessions:** You will be assigned five lab assignments in the term. These lab assignments require you to apply the principles you have learned from lectures. Each lab assignment will have a recorded introduction. Students are expected to watch the recorded lab introduction before attempting the lab assignments.

Lab 1, Lab 2, and Lab 4 are formatted as quizzes and integrated to Brightspace. Lab 3 and Lab 5 are available as pdf handouts and students are expected to type up reports and upload them on their corresponding assignment dropboxes on Brightspace.

Lab exercise 5 requires the use of Google Earth Pro (Free). Available for Windows, macOS and Linux – check the following link for system requirements and installation instructions: <https://support.google.com/earth/answer/21955?hl=en>

Most deadlines of lab exercises in this course occur every week on Wednesday night.

## **STUDENT RESOURCES AND COMMUNICATION**

### **Virtual Office Hours, Email and Appointments**

If you have questions pertaining to lecture materials, I encourage you to come to my virtual office hours or to ask me your questions at the end of class or make an appointment for a virtual meeting.

All questions about missed assignments, missed exams, and other practical concerns about the course should be directed to me by email. Emails will be responded to during business hours only. Please place the course number GEOG 1010 in the subject line. Private correspondence with the Instructor and Teaching Assistants should be through a Carleton email account.

### **Brightspace Course Site**

The Brightspace course site of GEOG 1010 contains information on all aspects of the course. It includes partial outlines of lectures (not complete notes) and graphs or diagrams presented in class. It includes the interactive short lecture videos. You will be able to access Brightspace course site and to download files on the first week of classes. If you are not able to login, please contact the course instructor.

## EVALUATION

Final marks in the course are based on your performance in five categories as follows:

Lecture Interactive Questions	20%
Midterm Exam	25%
Lab assignments/Exercises	35%
Final Exam	25%

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

### Lecture Interactive Questions

To encourage and enable active student engagement in lectures, this course uses H5P interactive questions as part of the recorded short lectures. Most of the short lectures will prompt students to answer 2-3 questions.

### Lab exercises

There will be five lab assignments (35% of the total course grade). The lab exercises are meant to complement the course material and to facilitate application and integration of knowledge gained from lectures and readings. Check the course schedule below for due dates for each lab.

### Exams

Exams will be conducted online in the format of a quiz available on the course Brightspace site. Exams will cover lecture materials.

## COURSE POLICIES

### Late Assignments

Late assignments will be penalized by subtracting 10% per day of the total value of the assignment. Students whose assignments are late because of a valid medical reason or family emergency will not be penalized, however, documentation from a family physician or counseling services will be required.

### Missed Assignments or Exams

Students who fail to submit an assignment or write the midterm exam will receive an automatic grade of zero. The only exceptions will be for instances of significant illness or a family emergency. Students who are not able to write the final exam during the exam period must consult with *Exam Services* as soon as they are aware that they will miss the test.

### Standards of Written Work

Any assignment submitted should be written using *word processing software* and checked for spelling and grammar. The overall presentation quality of the assignments will be reflected in your grade.

## ACADEMIC INTEGRITY

Academic integrity is a necessary foundation for all meaningful scholarly activity and verified instances of intellectual dishonesty will be dealt with in full accordance with the procedures laid out in Academic Integrity Policy. Additional information regarding what constitutes plagiarism may be found on Carleton University web site: <https://carleton.ca/secretariat/wp-content/uploads/Academic-Integrity-Policy.pdf> The University Senate defines plagiarism as “presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one’s own.” This can include:

- reproducing or paraphrasing portions of someone else’s published or unpublished material, regardless of the source, and presenting these as one’s own without proper citation or reference to the original source;
- submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another’s data or research findings;
- failing to acknowledge sources through the use of proper citations when using another’s works and/or failing to use quotation marks;
- handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs."

Plagiarism is a serious offence which cannot be resolved directly with the course’s instructor. The Associate Dean of the Faculty conducts a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They can include a final grade of "F" for the course.

## ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

**Pregnancy obligation:** write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: <http://www.carleton.ca/equity/>

**Religious obligation:** write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: <http://www.carleton.ca/equity/>

**Academic Accommodations for Students with Disabilities:** The **Paul Menton Centre** for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your **Letter of Accommodation** at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (*if applicable*). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (*if applicable*) at <http://www.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/> You can visit the Equity Services website to view the policies and to obtain more detailed information on academic accommodation at <http://www.carleton.ca/equity/>

**Survivors of Sexual Violence:** As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and where survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: <https://carleton.ca/equity/sexual-assault-support-services>

**Students representing Carleton University, Ontario or Canada** (at academic or sports events): I fully support students involved with organizations and teams that travel during the semester; however, with this privilege comes additional responsibility. You are responsible for providing formal documentation identifying the organization you represent and potential schedule conflicts with this course. In the event that you are travelling and unable to attend an exam, you must schedule a secondary exam before you depart. Without proper documentation, a missed exam will earn zero points.

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**Global Environmental Systems (GEOG1010)  
Summer term 2021 Course Outline**

<b>Week</b>	<b>Lecture Class</b>	<b>Lab</b>	<b>Readings</b>
May 6-8	Orientation	Complete the Orientation Quiz on Brightspace to unlock the course content	Course outline and the Orientation section on Brightspace
May 10-14	The Sun, the Seasons & The Atmosphere The Global Energy System Global Climate Change	Lab 1: Introduction to Numerical Calculations and Graphing (5%)	Page 47-58
May 17-21	Atmospheric Circulation Water Cycle and Precipitation	Lab 2: Net Radiation at the Earth's Surface (5%) <i>Lab exercise 1 is on Wednesday May 19 11:59pm</i>	Page 59-70 Page 72-74 Page 77-96
May 24-28	Weather <i>Midterm Exam (1 hour exam that can be attempted between May 27 12:01am and May 30 11:59pm)</i>	Lab 3: Climate Data and Climate Change (10%) <i>Lab exercise 2 is due on Wednesday May 26 11:59pm</i>	Page 97-102
May 31- June 4	Tectonic Plates Mass Movements Streams	Lab 4: Plate Tectonics (5%) <i>Lab exercise 3 is due on Wednesday June 2 11:59pm</i>	Page 154-174 Page 199-203 Page 230-239
June 7-11	Glaciers Soils	Lab 5: Geomorphic Interpretation Using Google Earth (10%) <i>Lab exercise 4 is due on Wednesday June 9 11:59pm</i>	Page 203-210 Page 230-239
June 14-18	Biogeography: Introduction, Individuals Biodiversity	<i>Lab exercise 5 is due on Wednesday June 16 11:59pm</i>	
<b>June</b>	<b><i>FINAL EXAM</i></b>		