

Global Environmental Systems, GEOG1010

Carleton University
Department of Geography & Environmental Studies
Winter 2022

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Virtual Office Hours: Thursday (4:00pm-5:00pm) or by appointment
Virtual Office Hours Zoom Link: <https://carleton-ca.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

Blended delivery with a mixture of synchronous online meetings and asynchronous activities. There are **three synchronous class lecture meetings via zoom**. Students are also expected to take **Fixed Duration** midterm and the final exams. The schedule of the synchronous class activities is provided in “GEOG1010 Synchronous Online schedule” table on this page. The rest of the lectures will be delivered asynchronously. Students enrolled in lab sections B01, B04, and, B05 will complete all their lab requirements through asynchronous activities; while students enrolled in lab sections B02, and B03 will attend weekly in-person lab sessions in Loeb A237.

GEOG1010 Synchronous Online Schedule

Date and Time	Lecture Topic/Activity	Zoom Link
Monday January 10 2022 1:05pm-2:25pm ET	Class Orientation and Introduction to GEOG1010	https://carleton-ca.zoom.us/j/91205838283
Monday February 28 2022 1:05pm-2:25pm ET	Weather	https://carleton-ca.zoom.us/j/91205838283
Wednesday March 02 2021 1:05pm-2:25pm ET	Midterm Exam	
Monday April 11 2021 1:05pm-2:25pm ET	Biodiversity	https://carleton-ca.zoom.us/j/91205838283
April (exact date and time to be announced)	Final Exam	

All course content (lectures, labs, quizzes, midterm exam, and final exam) is presented online via the course Brightspace site [Homepage - GEOG1010B Global Environmental Systems \(LEC\) Winter 2022 \(carleton.ca\)](https://carleton.ca). 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.

Regarding the asynchronous activities of the class, students are expected to spend at least 5 to 6 hours per week watching the recorded lectures and completing the lab assignments.

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 Brightspace course page. © Text Copyright Darren Leaver 2018.

COURSE TEACHING ASSISTANTS

Check Brightspace for TAs contact information and virtual office hours.

SCHEDULE

GEOG1010 starts on Monday January 10 2022 and ends on Monday April 11 2022. The weekly work completed in this class is equivalent to two 1.5hr lectures and one 2hr lab session.

Lectures: The content of this course is spread over 14 Weeks (Week 1 until Week 14). Each week will present up to two related topics. Each of Week 2-Week 13 contains a series of 3-6 recorded mini lectures (20-30min each). These lectures were recorded during the Fall 2020 GEOG1010 live streaming. These lecture videos will include one or more interactive questions. At the end of each video, you must go to the 'Submit Screen' (star button at end of video timeline) and press the 'Submit Answers' button for your answers to be submitted to the gradebook. An example of an interactive video can be found here: <https://h5p.org/interactive-video>.

At the end of each week, you will take a quiz (named Week 1 Quiz, Week 2 Quiz, etc.) that allows you to test your acquired knowledge from watching the recorded lectures. Students are expected to complete the recorded lectures on their own but it's highly recommended to follow the proposed completion dates. The teaching team will assess your progress through the weekly quizzes, the midterm exam, and the final exam. Deadlines for weekly quizzes in this course occur each Sunday night of the semester.

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 to introduce the concepts used in the lab and provide some hints for answering the questions in the lab. 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.

HOW TO GET HELP IN THIS COURSE

For lectures, we are using weekly lecture discussion forums to answer questions related to lectures. You are welcome to join the instructor zoom office hour to discuss your questions.

For labs, we are using weekly lab discussion forums to answer questions related to lab assignments. You are welcome to join the TA zoom office hour to discuss your lab questions.

For general questions related to course organization and/or missed assignments, email the questions to the instructor or the TA.

EVALUATION

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

Lecture Interactive Questions	10%
Weekly Quizzes (10 quizzes, 2.5% each)	25%
Midterm Exam	15%
Lab Assignments/Exercises	30%
Final Exam	20%

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 zoom polling during the live synchronous lectures and H5P interactive questions as part of the recorded short lectures. Most of the short lectures will prompt students to answer 2-3 questions. To receive the full 10% marks from the interactive questions, all zoom polling and H5P interactive questions in all videos must be answered.

Weekly Quizzes

There will be ten weekly quizzes (2.5% each) and a bonus orientation quiz (1%). Each weekly quiz will cover the lecture content covered in a specific week. For instance, Week 2 Quiz covers the topics covered in Week 2. Each weekly quiz will consist of 5 multiple choice questions with only one right answer to each question. Once you start the quiz, you have 10 minutes to complete and submit your answers. You have one attempt for each weekly quiz. Students who fail to submit a quiz will receive an automatic grade of zero. The only exceptions will be for instances of significant illness or a family emergency.

Lab Assignments/Exercises

There will be five lab assignments (30% 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. 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.

Exams

Exams will be conducted online in the format of a quiz available on course Brightspace site. Exams will cover lecture materials. Only students who have made prior arrangements with the instructor, or students who have contacted the instructor within 5 days of the missed midterm exam will be permitted to write the make-up exam.

COURSE POLICIES

Missed Final Exam

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.

Late Assignments

Late assignments will be penalized by subtracting 10% per day of the total value of the assignment. Students are also encouraged to directly connect with the course instructor to discuss required accommodations arising from the COVID-19 situation.

Missed Assignments or Quizzes

students are advised to complete the [self-declaration form](#) available on the Registrar's Office website to request academic accommodation for missed course work including exams and assignments. Students are also encouraged to directly connect with the course instructor to discuss required accommodations arising from the COVID-19 situation. 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

Lab3 and Lab 5 assignments 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.

EXPECTATIONS FROM STUDENTS ATTENDING IN-PERSON LAB SESSIONS

All members of the Carleton community are required to follow COVID-19 prevention measures and all mandatory public health requirements (e.g. wearing a mask, physical distancing, hand hygiene, respiratory and cough etiquette) and [mandatory self-screening](#) prior to coming to campus daily.

If you feel ill or exhibit COVID-19 symptoms while on campus or in class, please leave campus immediately, self-isolate, and complete the mandatory [symptom reporting tool](#). For purposes of contact tracing, attendance will be recorded in all classes and labs. Participants can check in using posted QR codes through the cuScreen platform where provided. Students who do not have a smartphone will be required to complete a paper process as indicated on the [COVID-19 website](#).

All members of the Carleton community are required to follow guidelines regarding safe movement and seating on campus (e.g. directional arrows, designated entrances and exits, designated seats that maintain

physical distancing). In order to avoid congestion, allow all previous occupants to fully vacate a classroom before entering. No food or drinks are permitted in any classrooms or labs.

For the most recent information about Carleton's COVID-19 response and required measures, please see the [University's COVID-19 webpage](#) and review the [Frequently Asked Questions \(FAQs\)](#). Should you have additional questions after reviewing, please contact covidinfo@carleton.ca

Please note that failure to comply with University policies and mandatory public health requirements, and endangering the safety of others are considered misconduct under the [Student Rights and Responsibilities Policy](#). Failure to comply with Carleton's COVID-19 procedures may lead to supplementary action involving Campus Safety and/or Student Affairs.

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-2021.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;

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 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.

**Global Environmental Systems (GEOG1010)-B
Winter term 2022 Course Outline**

Week	Lecture Class	Lab	Readings
Jan. 10-14	Introduction to Course-Synchronous class lecture on Mon. Jan. 10 1:05pm-2:25pm ET <i>Complete Week 1 Quiz: Orientation Quiz by Jan. 16 11:59pm</i>	<i>NO LAB</i>	Course outline and the Orientation section on Brightspace
Jan. 17-21	The Sun, the Seasons & The Atmosphere The Global Energy System <i>Complete Week 2 Quiz by Jan.23 11:59pm</i>	Lab 1: Introduction to Numerical Calculations and Graphing (5%)	Page 47-58
Jan. 24-28	The Global Energy System (cont'd) Global Climate Change <i>Complete Week 3 Quiz by Jan. 30 11:59pm</i>	Lab 2: Net Radiation at the Earth's Surface (5%) <i>Lab 1 is due on Wed. Jan. 26</i>	Page 47-58
Jan. 31- Feb. 4	Atmospheric Circulation <i>Complete Week 4 Quiz by Feb. 6 11:59pm</i>	Lab 2: Net Radiation at the Earth's Surface (5%)	Page 59-70
Feb. 7-11	Water Cycle and Precipitation <i>Complete Week 5 Quiz by Feb. 13 11:59pm</i>	Lab 3: Climate Data and Climate Change (7.5%) <i>Lab 2 is due on Wed. Feb. 09</i>	Page 72-74 Page 77-96
Feb. 14-18	Weather <i>Complete Week 6 Quiz by Feb. 20 11:59pm</i>	Lab 3: Climate Data and Climate Change	Page 97-102
Feb. 21-25	<i>NO CLASS – Fall BREAK</i>	<i>NO LAB – Fall BREAK</i>	
Feb. 28- March 4	Mon. Feb. 28: Weather (cont'd)- Synchronous class lecture 1:05pm-2:25pm ET Wed. March 2: Midterm Exam 1:05pm-2:25pm ET	<i>NO LAB-Midterm week</i>	Page 97-102
March 7-11	Tectonic Plates Mass Movements <i>Complete Week 9 Quiz by March 13 11:59pm</i>	Lab 4: Plate Tectonics (5%) <i>Lab 3 is due on Wed. March 9</i>	Page 154-174 Page 199-203 Page 230-239
March 14- 18	Streams <i>Complete Week 10 Quiz by March 20 11:59pm</i>	Lab 4: Plate Tectonics	Page 203-210
March 21- 25	<i>Glaciers</i> <i>Complete Week 11 Quiz by March 27 11:59pm</i>	Lab 5: Geomorphic Interpretation Using Google Earth (7.5%) <i>Lab 4 is due on Wed. March 23</i>	Page 230-239
March 28- Apr. 1	Soils <i>Complete Week 12 Quiz by Apr. 3 11:59pm</i>	Lab 5: Geomorphic Interpretation Using Google Earth	
Apr. 4- 8	Biogeography: Introduction, Individuals <i>Complete Week 13 Quiz by Apr. 10 11:59pm</i>	<i>NO LAB</i> <i>Lab 5 is due on Wed. Apr. 06</i>	
Apr. 11	Biodiversity- Synchronous class lecture on Monday Apr. 11	<i>NO LAB</i>	
Apr.	<i>FINAL EXAM</i>		