

## Global Environmental Systems, GEOG1010-B

Carleton University  
Department of Geography & Environmental Studies  
Fall 2022

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Office Hours: Fridays (11:30am-12:30pm) or by appointment

### **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**

Lectures will follow the attached course outline. The schedule may require minor revisions to accommodate unexpected scheduling issues. The lectures will introduce and illustrate the major concepts in global environmental systems. Support material will be available on the course Brightspace site.

### **SCHEDULE**

**Lectures:** Monday and Wednesday 4:35pm- 5:55pm in Loeb Building Room: C264

**Lab sessions:** - section A01: Wednesday 7:05pm-8:55pm in Loeb Building A120  
- section A02: Thursday 8:35am-10:25am in Loeb Building A120  
- section A03: Thursday 11:35am-1:25pm in Loeb Building A120  
- section A04: Tuesday 2:35pm-4:25pm in Loeb Building A120  
- section A05: Friday 8:35am-10:25am in Loeb Building A120  
- section A06: Friday 2:35pm-4:25pm in Loeb Building A120

Note the labs will run in the following order: A04→A01→ A02→A03→ A05→A06

### **COURSE TEACHING ASSISTANT**

Check Brightspace for TA contact information and office hours.

### **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.

### **STUDENT RESOURCES AND COMMUNICATION**

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

If you have questions pertaining to lecture material, I encourage you to come to my office hours or to meet me at the end of class to make an appointment.

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 (this is accessible in Brightspace).

### **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. You need to supplement these notes by attending the class lectures or by referring to the textbook. 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 Participation Questions	10%
Midterm Exam	25%
Lab assignments/Exercises	35%
Final Exam	30%

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 Participation Questions**

To encourage and enable active student participation in lectures, this course requires the use of the iClicker app to answer the lecture participation questions.

#### **Setting up iClicker Account:**

1-Create your iClicker Reef account: Go to <https://student.iclicker.com/#/login> or download the iClicker free application on your smart device then select sign up option.

2- Sign up for a 14-day iClicker Reef free account. You should use your university email address and your Carleton University ID in the Student ID field. After the 14-day trial period, you have to pay for subscription (\$19.50 for a six-month subscription).

3- Search with the following information to find this course and **add** it to your iClicker account:

Institution: Carleton University

Course: GEOG1010: Global Environmental Systems

### **Lab exercises**

There will be five lab assignments. The lab exercises are meant to complement the course material and to facilitate application and integration of knowledge gained from lectures and readings. The lab exercises will be posted on Brightspace at least one day ahead of their corresponding lab session. Please feel free to collaborate with others during the lab sessions to obtain common data, but please submit your own individually written lab reports that contain your own analyses and answers to questions. The assignment reports must be received by the start of the lab period of the day on which they are due. If you arrive late to a laboratory period on an assignment due date, it will be considered late and will be penalized by -10% of the maximum assignment grade. Weekends count as 2 days.

### **Exams**

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 with a valid doctor's note explaining why they missed the exam will be permitted to write the make-up exam.

## **COURSE POLICIES**

### **Late Assignments**

Late assignments will be penalized by subtracting 10% per day (including Saturday and Sunday) 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. If you are not able to hand your assignment directly to the Instructor or TA, you may email a copy of your work to demonstrate you have completed it on time (before the due date) and provide a hard copy (for marking) as soon as possible after that. Every student will be able to hand in any one assignment up to 12 hours late without penalty. Note that material handed-in via the departmental drop box will not be accepted, unless you make prior arrangements with the instructor or TA.

### **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 printed 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](mailto: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](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.

**Global Environmental Systems (GEOG1010)**  
**Fall term 2022 Course Outline**

<b>Week</b>	<b>Lecture Class</b>	<b>Lab</b>	<b>Readings</b>
Sept. 7	Introduction to Course	<i>NO LAB</i>	Course outline
Sept. 12-16	The Sun, the Seasons & The Atmosphere The Global Energy System	Lab 1: Topographic Maps and Navigation (7%)	Page 47-58
Sept. 19-23	The Global Energy System (cont'd) Global Climate Change	Lab 1 (Cont'd)	Page 47-58
Sept. 26-30	Atmospheric Circulation	Lab 2: Net Radiation at the Earth's Surface (7%) <i>Lab 1 is due at the beginning of your lab period</i>	Page 59-70
Oct. 3-7	Water Cycle and Precipitation	Lab 2 (Cont'd)	Page 72-74 Page 77-96
Oct. 10-14	<b>Oct. 10: NO CLASS- Statutory Holiday</b> Oct. 12 Weather	Lab 3: Climate Data and Climate Change <i>Lab 2 is due at the beginning of your lab period</i>	Page 97-102
Oct. 17-21	Oct. 17: Weather (cont'd) <b>Oct. 19: MIDTERM EXAM</b>	Lab 3 (Cont'd)	Page 97-102
Oct. 24-28	<i>NO CLASS – Term BREAK</i>	<i>NO LAB – Term BREAK</i>	
Oct. 31- Nov. 4	Tectonic Plates Mass Movements	Lab 4: Plate Tectonics (7%) <i>Lab 3 is due at the beginning of your lab period</i>	Page 154-174 Page 199-203 Page 230-239
Nov. 7-11	Streams	Lab 4 (Cont'd)	Page 203-210
Nov. 14-18	Glaciers	Lab 5: Geomorphic Interpretation Using Google Earth (7%) <i>Lab 4 is due at the beginning of your lab period</i>	Page 230-239
Nov. 21-25	Soils	Lab 5 (Cont'd)	
Nov. 28- Dec. 2	Biogeography: Introduction, Individuals Biodiversity	<i>Lab 5 is due at the beginning of your lab period</i>	
Dec. 5-9	<i>NO CLASS</i>	<i>NO LAB</i>	
<b>Dec.</b>	<b><i>FINAL EXAM</i></b>		