

GEOG 308 LEC01 Climate and Ecosystems

GFC Hours 3-2

Fall 2022 classes: September 6th – December 7th, 2022

Section	Days	Time	Location
LEC 01	MWF	11:00-11:50AM	SA104
B01	M	3:00-4:50PM	ES415
B02	T	2:00-3:50PM	ES307
B03	W	8:00-9:50AM	ES307
B04	R	11:00-12:50PM	ES307
Instructor: Dr. John Yackel		Office: ES 444	
Telephone: 403-220-4892		Email: yackel@ucalgary.ca	
		Office hours: M 12:00-12:45; W 12:30-1:15	

The **Department of Geography** condemns the longstanding and continued injustices against those marginalized by racism, sexism, homophobia, transphobia, classism, xenophobia, able-bodied normativity, mental health profiling, and other forms of prejudice. We are pained by the fact that injustices are unevenly borne. <https://arts.ucalgary.ca/news/anti-racism-statement>

Territorial Acknowledgement

The Department of Geography would also like to acknowledge the traditional territories of the people of the Treaty 7 region in southern Alberta. The City of Calgary is also home to Métis Nation of Alberta, Region III. <https://www.ucalgary.ca/indigenous/cultural-protocol>

Official Course Description

Introduction to the Earth's atmospheric environment (elements and controls of climate and their implications for hydrology, vegetation, and soils) and the nature and distribution of ecosystems and vegetation. Incorporates interactions between humans and their environment, especially those leading to global change on the decade to century time-scale.

Course Objectives

Students in this course will learn to:

1. Explain the various modes of energy transfer that occur at the Earth's surface and throughout the atmosphere.
2. Understand atmospheric circulation, and how it is controlled energy transfers and the fundamental properties of air.
3. Explain the general circulation of Earth's atmosphere, and its relationship to weather and climate patterns.
4. Explain and predict how climate patterns affect vegetation biomes, and how changes in climate lead to plant succession.
5. Use analytical techniques to study the state of the atmosphere and its dynamics.
6. Identify reliable sources of scientific information, and construct knowledge from primary sources.

Course Learning Outcomes

The Department of Geography is committed to student knowledge and skill development. The table below lists the key learning outcomes for this course, the program-learning outcomes to which they contribute, and the expected level of achievement.

Course Learning Outcomes	PLO(s)*	Level(s)**
Students should be able to explain basic atmospheric processes	1, 2, 5, 7	2
Students should be able to explain interactions and feedbacks between the atmosphere and Earth's surface	1, 2, 5, 7	2
Students should be able to explain basic drivers of climate change	1, 2, 5, 7	2
Students should be able to analyze atmospheric data and models		
Students should be able to discriminate human vs natural drivers of climate change	1, 2, 5, 7	2

Students should be able to explain plant succession, and its dependence upon weather and climate change	1, 2, 5, 7	2
Students should be able to the major vegetation biomes, and how their geographic location is dependent upon weather and climate	1, 2, 5, 7	2

*PLOs = Program Learning Outcomes: 1 = reflect and communicate diverse human-environment perspectives, 2 = identify and explain human-environment processes, 3 = implement sampling, data collection, analyses and communication methods, 4 = analyze spatial and temporal aspects of human-environment systems, 5 = employ knowledge, arguments, and methodologies for solving human-environment problems, 6 = evaluate geospatial data and manipulate it to create cartographic products, 7 = communicate geographic concepts using oral, written, graphic, and cartographic modes, and 8 = demonstrate literacy skills.

**Levels: 1 = Introductory, 2 = Intermediate, and 3 = Advanced.

Prerequisites

There are no prerequisites for this course.

Learning Resources

Required Textbook: Discovering Physical Geography, 4th Edition (2017) Canadian Edition by Alan F. Arbogast, Lisa Ford, Daryl Dagesse. Print or eBook.

Recommended Textbook: Meteorology Today: An Introduction to Weather, Climate, and the Environment, 2nd Canadian Edition (2016). Ahrens, Jackson, & Jackson. Nelson Education. ISBN-13: 978-0-17-653079-2.

- This is an excellent textbook if you are interested in reading a little deeper on weather/climate issues. May also be relevant for GEOG 408. Any edition of this textbook would be helpful; should be able to find used copies.

Grading (Weighting)

Assessments	Weighting	Dates
Midterm (50 min)	25%	October 28 th (in-class)
Final Exam (120 min)	30%	Registrar Scheduled
Lab Assessments (6 @ 7.5% ea)	45%	See course schedule

Exams: The midterm test will be administered in-person only during class on October 28th. If you miss this Midterm, for whatever reason, then you will be offered a make-up exam at 7:15am on Tuesday, November 1st (meeting at ES 444).

Labs: There will be 6 labs in this course, each worth 7.5% of your final mark. Learning for each lab will be assessed using a combination of quizzes and assignments. When assignments are required to be handed in, individual work must be submitted. Although students are permitted to collaborate on lab work for this course, each student must hand in an individual assignment that reflects their own work. Given the numerical nature of many of the assignments, this can lead to some confusion regarding plagiarism. In written questions, it is easy to ensure that responses are written “in your own words”. For mathematical problems, this can be more difficult; often there is only one correct approach to a question, and limited ways to express that approach in an assignment. In general, it is okay if two students’ hand in very similar answers to mathematical questions, provided they **each did the work themselves**. The line is quite clear: there should be **no digital files transferred between students**. Two students can be sitting next to each other working together but that should be done on **two separate computers**, working together on **two separate documents**. To make life easier on the TA marking your assignments, you may wish to format your documents differently to make it clear that two people did the work. All lab assignments must be submitted in a D2L compatible format (i.e. .pdf or .docx).

Grading System

96 – 100	A+	77 – 80	B	59 – 61	C-
90 – 95	A	71 – 76	B-	55 – 58	D+
86 – 89	A-	65 – 70	C+	50 – 54	D
81 – 85	B+	62 – 64	C	0 – 49	F

A+	4.00	Outstanding performance
A	4.00	Excellent performance
A-	3.70	Approaching excellent performance
B+	3.30	Exceeding good performance
B	3.00	Good performance
B-	2.70	Approaching good performance
C+	2.30	Exceeding satisfactory performance
C	2.00	Satisfactory performance
C-	1.70	Approaching satisfactory performance.
D+	1.30	Marginal pass. Insufficient preparation for subsequent courses in the same subject
D	1.00	Minimal Pass. Insufficient preparation for subsequent courses in the same subject.
F	0.00	Failure. Did not meet course requirements.

Flexible Grade Option (CG Grade)

<https://www.ucalgary.ca/pubs/calendar/current/f-1-3.html>

Exams & Deferrals <https://www.ucalgary.ca/registrar/exams>

Referencing Standard

In written work presented in this class, the accepted method for referencing the work of others will be the Chicago Manual of Style: <https://www.chicagomanualofstyle.org/home.html>

Important Dates

The last day to drop this course and receive a tuition fee refund is **Thursday, September 15th, 2022**. The last day to add or swap a course for Fall 2022 is **Friday, September 16th, 2022**. The last day to withdraw from this course is **Wednesday, December 7th, 2022**. Please note that the University is closed on Friday, September 30th; Monday, October 10th; and Friday, November 11th, 2022.

For additional detailed course information posted by the instructor, visit the course Desire2Learn page online at <https://d2l.ucalgary.ca/d2l/home>.

Resources and Writing support

Please note writing support resources provided by the Student Success Centre <https://ucalgary.ca/ssc/resources/writing-support> and the library <https://libguides.ucalgary.ca/guides/>

University of Calgary Academic Integrity Policy

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. The University Calendar includes a statement on the principles of conduct expected of all members of the university community (including students, faculty, administrators, any category of staff, practicum supervisors, and volunteers), whether on or off university property. This statement applies in all situations where members of the university community are acting in their university capacities. All members of the university community have a responsibility to familiarize themselves with the principles of conduct statement, which is available at: www.ucalgary.ca/pubs/calendar/current/k.html.

Plagiarism, Cheating, and Student Misconduct

The University of Calgary is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect.

Academic dishonesty is not an acceptable activity at the University of Calgary, and students are **strongly advised** to read the Student Misconduct section in the University Calendar at: www.ucalgary.ca/pubs/calendar/current/k-3.html. Often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are (1) presenting another student's work as your own, (2) presenting an author's work or ideas as your own without adequate citation, and (3) using work completed for another course. Such

activities will not be tolerated in this course, and students suspected of academic misconduct will be dealt with according to the procedures outlined in the calendar at: <https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-procedure>

For students wishing to know more about what constitutes plagiarism and how to properly cite the work of others, the Department of Geography recommends that they attend Academic Integrity workshops offered through the Student Success Centre: <https://www.ucalgary.ca/student-services/student-success/learning/academic-integrity>

Instructor Intellectual Property

Information on Instructor Intellectual Property can be found at <https://www.ucalgary.ca/legal-services/university-policies-procedures/intellectual-property-policy>

Freedom of Information and Protection of Privacy

Freedom of Information and Protection of Privacy (FOIP) legislation in Alberta disallows the practice of having students retrieve assignments from a public place, such as outside an instructor's office, the department office, etc. Term assignments will be returned to students individually, during class or during the instructor's office hours; if students are unable to pick up their assignments from the instructor, they must provide the instructor with a stamped, self-addressed envelope to be used for the return of the assignment.

Posting of Grades and Picking-up of Assignments

Graded assignments will be returned by the instructor or teaching assistant personally during scheduled lecture or laboratory periods, unless they are made available electronically through the course D2L webpage. Grades and assignments will not be available at the Department of Geography's main office and assignments cannot be dropped off at the Department Office..

Academic Accommodations

It is the student's responsibility to request academic accommodations, according to the university policies and procedures listed in the University Calendar.

The student accommodation policy can be found at: <https://www.ucalgary.ca/pubs/calendar/current/b-6-1.html>

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: <https://www.ucalgary.ca/legal-services/university-policies-procedures/accommodation-students-disabilities-procedure>

Students needing an accommodation based on a protected ground other than disability should communicate this need, preferably in writing to their instructor or the Department Head (email: freeman@ucalgary.ca).

Learning Technologies and Requirements

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology.

- A computer with a supported operating system, as well as the latest security and malware updates
- A current and updates web browser
- Webcam (built in or external)
- Microphone and speaker (built in or external) or headset with microphone
- Broadband internet connection

Guidelines for Zoom Sessions

Zoom is a video conferencing program that will allow us to meet at specific times for a "live" video conference, so that we can have the opportunity to meet each other virtually and discuss relevant course topics as a learning community.

To help ensure Zoom sessions are private, do not share Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor's permission.

The use of video conferencing programs relies on participants to act ethically, honestly and with integrity; and in accordance with the principles of fairness, good faith and respect (as per the [Code of Conduct](#)). When entering Zoom or other video conferencing sessions (such as MS Teams), you play a role in helping create an effective, safe and respectful learning environment.

Please be mindful of how your behavior in these sessions may affect others. Participants are required to use names officially associated with their UCID (legal or preferred names listed in the Student Centre) when engaging in these activities. Instructors/moderators can remove those whose names do not appear on class rosters. Non-compliance may be investigated under relevant University of Calgary conduct policies (e.g. Student Non Academic Misconduct Policy). If participants have difficulties complying with this requirement, they should email the instructor of the class explaining why, so the instructor may consider whether to grant an exception, and on what terms. For more information on how to get the most out of your Zoom sessions visit: <https://elearn.ucalgary.ca/guidelines-for-zoom/>.

If you are unable to attend a Zoom session, please contact your instructor to arrange an alternative activity for the missed session (e.g., to review a recorded session). Please be prepared, as best as you are able, to join class in a quiet space that will allow you to be fully present and engaged in Zoom sessions. Students will be advised by their instructor when they are expected to turn on their webcam (for group work, presentations, etc.).

The instructor may record online Zoom class sessions for the purposes of supporting student learning in this class – such as making the recording available for review of the session or for students who miss a session. Students will be advised before the instructor initiates a recording of a Zoom session. These recordings will be used to support student learning only and will not be shared or used for any other purpose.

Media Recording (if applicable)

https://elearn.ucalgary.ca/wp-content/uploads/2020/05/Media-Recording-in-Learning-Environments-OSP_FINAL.pdf

Course evaluations and student feedback

Student feedback will be sought at the end of the course through the standard University Student Ratings of Instruction (USRI) and Faculty course evaluation forms.

Accessibility

Please contact the instructor directly to discuss accessibility options

Copyright Legislation

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright <https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy> and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorised sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Act.

Wellness and Mental Health Resources

The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness, and academic success and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support, or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, <https://www.ucalgary.ca/wellnesscentre/services/mental-health-services>) and the Campus Mental Health Strategy website (<http://www.ucalgary.ca/mentalhealth/>).

Students requiring assistance are encouraged to email the **Student at Risk line** if they or others appear to need wellness assistance: sar@ucalgary.ca For more immediate response, please call: 403-210-9355 and select option #2.

Sexual Violence Policy

The University recognizes that all members of the University Community should be able to learn, work, teach and live in an environment where they are free from harassment, discrimination, and violence. Please see the policy available at <https://www.ucalgary.ca/legal-services/university-policies-procedures/sexual-and-gender-based-violence-policy>

Contact Information for Student and Faculty Representation

- Student Union VP Academic 403-220-3911, suvpaca@ucalgary.ca
- Students Union Representatives for the Faculty of Arts – 403-220-3913, arts1@su.ucalgary.ca, arts2@su.ucalgary.ca, arts3@su.ucalgary.ca, arts4@su.ucalgary.ca
- Student Ombuds Office information can be found at: www.ucalgary.ca/ombuds/

Emergency Evacuation/Assembly Points

Assembly points for emergencies have been identified across campus. Assembly points are designed to establish a location for information updates from the emergency responders to the evacuees; from the evacuated population to the emergency responders. For more information, see the University of Calgary's Emergency Management website: <https://www.ucalgary.ca/risk/emergency-management> **Our Muster Point is the Social Science Food Court**

Campus Safewalk

Campus Security, in partnership with the Students' Union, provides the Safewalk service, 24 hours a day, to any location on Campus, including the LRT station, parking lots, bus zones, and university residences. Contact Campus Security at 220-5333 or use a help phone, and Safewalkers or a Campus Security officer will accompany you to your campus destination.