

## GEOG 500 LEC01 Critical Zone Science

GFC Hours 3-0

Fall 2022 classes: September 6<sup>th</sup> – December 7<sup>th</sup>, 2022

Section	Days	Time	Location
LEC 01	MWF	2:00-2:50PM	HNSC124A

Instructor: Dr. Yvonne Martin	Office: ES 330
Email: ymartin@ucalgary.ca	Office hours: To be announced
Email communication will be through your UCalgary email address.	

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**

Examination of the Critical Zone, Earth's outer layer that extends from the top of vegetation to the bottom of the fresh groundwater zone. It is a constantly evolving boundary layer where rock, soil, water, air, and living organisms interact to regulate the landscape and natural habitats, and determine the availability of life-sustaining resources, including our food production and water quality.

### **Course Objectives**

Students will be exposed to a range of interdisciplinary material considering the Critical Zone, Earth's outer layer that extends from the top of vegetation to the bottom of the fresh groundwater zone. A focus will be on understanding the complexity of earth systems and the interaction of different aspects of the Critical Zone. Student initiative in the learning experience will be emphasized.

### **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)**
Explain essential advanced concepts in Critical Zone Science	2, 4	2,3
Understand operation of the various processes operating in the Critical Zone (biology, soil, geomorphology, hydrology, climate etc.)	2, 4	2,3
Gain an appreciation and understanding of complex, interdisciplinary earth systems	2, 4	2,3
Write a term project that demonstrates original and critical thinking skills	1,2,4,5,7,8	3
Students should be able to apply their knowledge gained in this course to other undergraduate courses and their future workplace setting	3, 7	3

\*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

3 units from GEOG 313 or 412 and 3 units from GEOG 305, 307, 408 or 410.

### Course Format

This course will be delivered in person as per the lecture room listed above. Additional course handouts will be made available on the first day of lectures that provide additional details about the course delivery.

### Learning Resources

Montgomery, D.R., 2012. *Dirt: the erosion of civilizations*. Univ of California Press

Students may purchase the hard copy or digital version of the book. Students will require a copy of the book for in-class activities. If students purchase a digital copy of the book, they should be prepared to bring an appropriate laptop or other device to access the book in the classroom or to print up the required pages in advance to bring to the classroom.

Course readings will also include required readings (e.g., journal articles, book chapter readings, web site readings). Information about access to these readings will be provided to students throughout the term.

### Assessment Methods

<b>Assessment</b>
Lecture Test #1 (22%)
Lecture Test #2 (22%)
Term Paper: Written term paper (30%) Term paper presentation (conference style) (14%)
Class engagement exercises (12%)

- It is not essential to pass all components to pass the course as whole
- There is no final examination for this course

### Grading System

90 – 100	A+	73 – 76.99	B	60 – 62.99	C-
85 – 89.99	A	70 – 72.99	B-	55 – 59.99	D+
80 – 84.99	A-	67 – 69.99	C+	50 – 54.99	D
77 – 79.99	B+	63 – 66.99	C	0 – 49.99	F

A	<b>4.00</b>	<b>Excellent performance</b>
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>

**Additional Course Information**

- If you miss a Lecture Test and possess a legitimate excuse, please email Dr. Martin as soon as possible. At the discretion of the Course Instructor and Department, accommodation such as a deferred test may be offered for a missed Lecture Test.
- Unexcused late term papers will be penalized at 20% per day, or portion thereof (including weekends).

In the event that a student misses a lecture test or any course work due to illness, supporting documentation, such as a medical note or a statutory declaration may be requested <https://www.ucalgary.ca/pubs/calendar/current/m-1.html> Please refer to <https://www.ucalgary.ca/registrar/registration/appeals/student-faq> for frequently asked questions concerning the provision of a medical note/statutory declaration.

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

**Supplementary Fees**

Not applicable

**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 15<sup>th</sup>, 2022**. The last day to add or swap a course for Fall 2022 is **Friday, September 16<sup>th</sup>, 2022**. The last day to withdraw from this course is **Wednesday, December 7<sup>th</sup>, 2022**. Please note that the University is closed on Friday, September 30<sup>th</sup>; Monday, October 10<sup>th</sup>; and Friday, November 11<sup>th</sup>, 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](http://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](http://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](mailto:freeman@ucalgary.ca)).

#### **Use of internet and electronic devices in class**

During regular lecture sessions, students may use a laptop (or other appropriate electronic device) for taking notes. **No electronic devices are allowed during lecture tests.**

#### **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**

Students with specific needs relating to accessibility should contact the Course Instructor.

#### **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](mailto: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](mailto:suvpaca@ucalgary.ca)
- Students Union Representatives for the Faculty of Arts – 403-220-3913, [arts1@su.ucalgary.ca](mailto:arts1@su.ucalgary.ca), [arts2@su.ucalgary.ca](mailto:arts2@su.ucalgary.ca), [arts3@su.ucalgary.ca](mailto:arts3@su.ucalgary.ca), [arts4@su.ucalgary.ca](mailto:arts4@su.ucalgary.ca)
- Student Ombuds Office information can be found at: [www.ucalgary.ca/ombuds/](http://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. The muster room for the lecture room is Taylor Family Digital Library. For more information, see the University of Calgary's Emergency Management website: <https://www.ucalgary.ca/risk/emergency-management>

### **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.