ERTH/GEOG 1030
Introduction to Physical Geography – Winter 2026
Department of Earth and Environmental Sciences

WHEN: MON, WED, FRI: 10:35PM—11:25AM

WHERE: KILLAM LIBRARY, MACMECHAN AUDITORIUM (FIRST FLOOR)

Dalhousie University acknowledges that we are in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People and pays respect to the Indigenous knowledges held by the Mi'kmaq People, and to the wisdom of their Elders past and present. The Mi'kmaq People signed Peace and Friendship Treaties with the Crown, and section 35 of the Constitution Act, 1982 recognizes and affirms Aboriginal and Treaty rights. We are all Treaty people.

Dalhousie University also acknowledges the histories, contributions, and legacies of African Nova Scotians, who have been here for over 400 years.

COURSE INSTRUCTOR(S)/STUDENT RESOURCES

Name	Email	Office Hours
Professor: Dr. Jennifer Grek Martin	jgrekmartin@dal.ca	LSC, Room B3079 11:30am – 1:00pm MW or by appt.
Teaching Assistant: Arinze Uzoezie	arinze.uzoezie@dal.ca	By email or in tutorial

COURSE OVERVIEW

This non-lab science course examines the nature of weather and climate, Earth's surface features and geomorphological processes as well as Earth's internal processes that contribute to landform development. An integral component of the course is the study of the representation and interpretation of physical geographic data through the examination of a variety of maps.

COURSE PREREQUISITES

None

COURSE EXCLUSIONS

None

COURSE DELIVERY

This course consists of an **in-person lecture component** that meets 3x per week (M, W, F @ 10:35am-11:25am) **and a separate in-person tutorial** that meets 1x per week, *check your tutorial day and time via Banner*. **All tutorials are held in LSC rm B2055 and include hands-on applications of lecture material with graded in-class exercises. Please bring a pencil, a ruler, and an eraser to all tutorials**. Success in this course depends on completion of all tutorials and attendance in lectures.

If you miss a lecture: Lectures will not be recorded, but lecture slides will be provided via Brightspace.
If you miss a tutorial: Email us ASAP. We will arrange a make-up deadline or grade redistribution.

For Students with Accommodations through Student Accessibility Centre:
I support students with accommodations and believe everyone has the right to learn! I will post my slides by the start of each lecture, which allows you to download the pdf and annotate it/take notes on each slide. If this does not satisfy your accommodation ('Access to Materials'), please see me after class or email me to discuss further options.

My goal is to give you a firm grounding in physical geography, whether as part of your degree program or simply to help you see the world around you in a different way. I am committed to teaching – in class, by email, and in marking assignments and exams; you can expect me to be fair and to want you to learn. I encourage questions and a safe and inclusive learning environment.
For your part, I hope the respect will be mutual and this term will be an enjoyable learning experience!

Learning Objectives

Students who take this class will learn about the processes responsible for the development of the Earth's geomorphological features, the evolution of these features through time, and the impact of humankind on the environment. Upon completion of the course, students will have developed basic skills in the interpretation of maps and data analysis and familiarized themselves with the practical applications of the course content in daily life.

Assessment:

Tutorials

8 tutorial assignments are each comprised of two parts. Part one will be handed in at the end of tutorial and the second part will be completed outside of class and handed in at the start of the next tutorial.

Assignment	**Date**	**total%**
Tutorial assignments (8 @ 6% each)	Weekly	48%
Quiz 01 (in class, paper, 50 minutes)	4 February	16%
Quiz 02 (in class, paper, 50 minutes)	11 March	16%
Quiz 03 (paper, 90 minutes)	(see Final exam schedule)	20%

Conversion of numerical grades to final letter grades follows the Dalhousie Grade Scale

A+ (90-100)	B+ (77-79)	C+ (65-69)	D (50-54)
A (85-89)	B (73-76)	C (60-64)	F (0-49)
A- (80-84)	B- (70-72)	C- (55-59)	

Course Policies on Missed or Late Academic Requirements

LATE ASSIGNMENTS: Late assignments (i.e., Tutorials) will incur a mark deduction penalty of 10% per day. **No tutorial assignments will be accepted later than three days after the initial deadline unless we have approved an alternate deadline**.

MISSED QUIZ: **Make-up quizzes will not be provided for any reason**. Contact me and if I approve your reason for missing a Quiz, I will reweight your extant quiz or quizzes. For example, if you miss Quiz 01, then Quiz 02 = 24% and Quiz 03 = 28%; if you miss Quiz 02 EITHER Quiz 01 = 24% and Quiz 03 = 28% OR Quiz 03 = 36% (whichever results in a higher Final Grade); if you miss both Quiz 01 and Quiz 02, Quiz 03 is worth 52%.

Course Policies Related to Academic Integrity

Tutorials: collaboration during tutorials is encouraged but each one submits their own work for assessment.
Quizzes: Individual work only.

The Use of Generative Artificial Intelligence (AI) in ERTH/GEOG1030

I am interested in you. Generative AI has many uses, but it cannot replace **you**.
So, while I accept that you could use generative AI to study for my tests, in this course I strictly prohibit the use of generative AI tools (including ChatGPT, Gemini, Microsoft Copilot, and other AI writing, image or map generating, and coding apps) for completing assignments and submitting the results as your own original work. Suspected use of generative AI in this manner will be considered a violation of the university's Academic Integrity policy.

I don't do this to make 'busy work'. I do this because I care about what you learn and how you learn it.
I want you to know the facts. Generative AI tells you what you want to hear, whether it is true or not.
I want you to think for yourself. Generative AI takes this away from you. It replaces your authenticity with claims of efficiency. Protect your brain so you know when AI makes mistakes.
I want you to be able to express yourself. Generative AI makes you sound mediocre, indistinct, like everyone else. In an era where we celebrate diversity, do you really want to sound like an algorithm?
I want you to do good things for the planet. The environmental costs of generative AI are immense and more varied than you might think. https://news.mit.edu/2025/explained-generative-ai-environmental-impact-0117

My use of Generative AI: all course materials, including lectures, lecture slides, assignment guidelines, and tests, **have been created by me or another human** *without* the use of generative AI.

Course Materials

There is no required textbook for this course. If you want a supplemental resource to the lectures that is freely available online, I will refer to the chapters from the following OER (PG) as readings in the course outline (NOTE: each unit is individually numbered, but the Table of Contents is consecutive):

Patrich, Jeremy. (2023). *Physical Geography*. Version 2. College of the Canyons/Zero Cost Textbook. https://oercommons.org/courses/introduction-to-physical-geography

Course Outline

Week/date	Topics for the week	Chapter (PG)	Due!
Week01	Introduction		
7, 9 January	Fundamentals of Physical Geography	*Unit 1, pp. 1-8*	
Week02	Fundamentals of Cartography	*Unit 1, pp. 8-15; Unit 4 (all)*	
12, 14, 16 January	Earth in Space	*Unit 5 (all)*	T1.1
Week03	Introduction to the Atmosphere	*Unit 6, pp. 76-82*	
19, 21, 23 January	Air Temperature and Pressure **22 January = last day to add Winter courses, drop Winter courses with full refund*	*Unit 6, pp. 82-95*	T1.2 / T2.1

Week04	Air Moisture and Precipitation	*Unit 7, pp. 95-110*	
26, 28, 30 January	Introduction to Climate – global circulation patterns	*Unit 7, pp. 110-114 & Unit 6, pp. 90-94*	T2.2 / 3.1
Week05	**5 February: Last day to drop Winter courses without a 'W'* **6 February: University Closed for Munro Day. No Classes*		
2, 4 February	Climate Change	*Unit 7*	
	Quiz 01 (16%) – 4 February	*Unit 1, Units 4-7*	
Week06	Introduction to the Lithosphere – Rocks and the Rock Cycle Plate Tectonics	*Units 8-11, Unit 13*	
9, 11, 13 February	Earthquakes and Tectonic Landforms	*Unit 13, 14*	T3.2 / 4.1
16-20 February	*WINTER STUDY BREAK! No Classes*		
Week07	Earthquakes, continued Volcanoes	*Unit 12*	
23, 25, 27 February	Weathering and Slope Processes	*Units 18, 16*	T4.2 / 5.1
Week08	Aeolian Environments and Coastal Processes	*Unit 12*	
2, 4, 6 March	Soils	*Units 8-16, 18*	T5.2 / 6.1
Week09	Desertification	*TBA*	
	Quiz 02 (16%) – 11 March		
9, 11, 13 March	Introduction to Ecosystems **9 March: Last day to drop Winter courses with a 'W'*	*TBA*	
Week10	Biomes and Biogeography I Biomes and Biogeography II – Invasive Species		
16, 18, 20 March	Introduction to the Hydrosphere		T6.2 / 7.1
Week11	Fluvial Geomorphology I	*Unit 17*	
23, 25, 27 March	Fluvial Geomorphology II	*Unit 17*	T7.2/ 8.1
Week12	Glaciers and Glacial Environments I and II	*Unit 17*	
30 March, 1 April	**3 April: University Closed, Good Friday Observed*	*Unit 19*	T8.2
Week13	TBA Course Wrap-up and Review for Quiz 03. See Final Exam	*Unit 19*	
6, 8 April	Schedule for Day and Time of Quiz 03 (20%)	*All Units*	

FINAL EXAM (check exam schedule): **Quiz03 (Material covered: 9 March – 8 April) (20%)**
Note: The final exam is NOT CUMULTATIVE. It will only focus on material from **9 March – 8 April.**

University Policies and Statements

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel, and support. Visit or e-mail the Indigenous Student Centre at 1321 Edward St or elders@dal.ca. Additional information regarding Mi'kmaq and Indigenous Relations (including the Elders in Residence program, Land Acknowledgements, Understanding Our Roots, and much more) can be found at: https://www.dal.ca/about/mission-vision-values/mikmaq-indigenous-relations.html

Internationalization

At Dalhousie, 'thinking and acting globally' enhances the quality and impact of education, supporting learning that is "interdisciplinary, cross-cultural, global in reach, and orientated toward solving problems that extend across national borders." Additional internationalization information can be found at: https://www.dal.ca/about/mission-vision-values/global-relations.html

Academic Integrity

At Dalhousie University, we are guided in all our work by the values of academic integrity: honesty, trust, fairness, responsibility, and respect. As a student, you are required to demonstrate these values in all the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity. Additional academic integrity information can be found at: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Student Accessibility Centre is Dalhousie's centre of expertise for matters related to student accessibility and accommodation. If there are aspects of the design, instruction, and/or experiences within this course (online or in-person) that result in barriers to your inclusion, please contact the Student Accessibility Centre (https://www.dal.ca/campus_life/academic-support/accessibility.html) for all courses offered by Dalhousie with the exception of Truro. For courses offered by the Faculty of Agriculture, please contact the Student Success Centre in Truro (https://www.dal.ca/campus_life/ssc.html).

Conduct in the Classroom – Culture of Respect

Substantial and constructive dialogue on challenging issues is an important part of academic inquiry and exchange. It requires willingness to listen and tolerance of opposing points of view. Consideration of individual differences and alternative viewpoints is required of all class members, towards each other, towards instructors, and towards guest speakers. While expressions of differing perspectives are welcome and encouraged, the words and language used should remain within acceptable bounds of civility and respect.

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness (Strategic Priority 5.2). Additional diversity and inclusion information can be found at: https://www.dal.ca/about/mission-vision-values/equity-diversity-inclusion-and-accessibility/about-office-equity-inclusion.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner - perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution. The full Code of Student Conduct can be found at: https://www.dal.ca/content/dam/www/about/leadership-and-governance/governing-bodies/code-student-conduct.pdf

Fair Dealing Policy

The Dalhousie University Fair Dealing Policy provides guidance for the limited use of copyright protected material without the risk of infringement and without having to seek the permission of copyright owners. It is intended to provide a balance between the rights of creators and the rights of users at Dalhousie. Additional information regarding the Fair Dealing Policy can be found at: https://www.dal.ca/content/dam/www/about/leadership-and-governance/university-policies/fair-dealing-policy.pdf

Student Use of Course Materials

Course materials are designed for use as part of this course at Dalhousie University and are the property of the instructor unless otherwise stated. Third party copyrighted materials (such as books, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law. Copying this course material for distribution (e.g. uploading to a commercial third-party website) may lead to a violation of Copyright law.

Student Resources and Support

University Policies and Programs

Important Dates in the Academic Year (including add/drop dates): http://www.dal.ca/academics/important_dates.html

Classroom Recording Protocol: https://www.dal.ca/content/dam/www/about/leadership-and-governance/university-policies/class-recording-protocol.pdf

Dalhousie Grading Practices Policies: https://www.dal.ca/content/dam/www/about/leadership-and-governance/university-policies/grading-practices-policy.pdf

Grade Appeal Process: https://www.dal.ca/campus_life/academic-support/grades-and-student-records/appealing-a-grade.html

Sexualized Violence Policy: https://www.dal.ca/content/dam/www/about/leadership-and-governance/university-policies/sexualized-violence-policy.pdf

Scent-Free Program: https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html

Learning and Support Resources

General Academic Support – Advising (Halifax): https://www.dal.ca/campus_life/academic-support/advising.html

General Academic Support – Advising (Truro): https://www.dal.ca/campus_life/ssc.html

Student Health & Wellness Centre: https://www.dal.ca/campus_life/health-and-wellness.html

On Track (helps you transition into university, and supports you through your first year at Dalhousie and beyond): https://www.dal.ca/campus_life/academic-support/On-track.html

Indigenous Student Centre: https://www.dal.ca/campus_life/communities/indigenous.html

Mi'kmaq and Indigenous Relations: https://www.dal.ca/about/mission-vision-values/mikmaq-indigenous-relations.html

Elders-in-Residence (The Elders in Residence program provides students with access to First Nations elders for guidance, counsel, and support. Visit the office in the Indigenous Student Centre or contact the program at elders@dal.ca or 902-494-6803: https://www.dal.ca/about/mission-vision-values/mikmaq-indigenous-relations/elders-in-residence-and-traditional-knowledge-keepers.html

Black Student Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre.html

LGBTQ2SIA+ Collaborative: https://www.dal.ca/about/mission-vision-values/equity-diversity-inclusion-and-accessibility/about-office-equity-inclusion/community-specific-groups/lgbtq2sia-collaborative.html

Dalhousie Libraries: http://libraries.dal.ca/

Copyright Office: https://libraries.dal.ca/services/copyright-office.html

Dalhousie Student Advocacy Services: https://www.dsu.ca/dsas?rq=student%20advocacy

Dalhousie Ombudsperson: https://www.dal.ca/campus_life/safety-respect/ombudsperson.html

Human Rights and Equity Services: https://www.dal.ca/about/mission-vision-values/equity-diversity-inclusion-and-accessibility/about-office-equity-inclusion/human-rights-and-equity-services.html

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Study Skills/Tutoring: http://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Faculty of Science Advising Support: https://www.dal.ca/faculty/science/current-students/undergrad-students/degree-planning.html

Safety

Biosafety: http://www.dal.ca/dept/safety/programs-services/biosafety.html

Chemical Safety: https://www.dal.ca/dept/safety/programs-services/chemical-safety.html

Radiation Safety: http://www.dal.ca/dept/safety/programs-services/radiation-safety.html

Laser Safety: https://www.dal.ca/dept/safety/programs-services/radiation-safety/laser-safety.html