ERTH 1080 **GEOLOGY 1** **Winter 2025**

Instructor: Dr. **Lexie Arnott** (Lexie@dal.ca)
Office: LSC 3081 (Biology wing)
Classes: LSC 4260 (Psych wing) 2:35-3:55pm
Tuesday & Thursday
Office Hours: Link on BrightSpace Homepage

Lab Instructor: **Mike Young** (Mike.Young@dal.ca)
Office: LSC 2055A
Labs: LSC 2055
Monday (B01) 11:35am-2:25pm
Monday (B02) 2:35-5:25pm
Thursday (B03) 11:35am-2:25pm
Office Hours: email for appointment
Optional Textbook: Laboratory Manual for Introductory Geology 4th Edition by Ludman and Marshak

***Land acknowledgement**: Throughout this term we will be studying about the Earth Sciences in Traditional Mi'kmaq Territory.*

Course Summary

This is an introductory Earth Sciences (geology) course: 3 credit hours, with a lab. ERTH 1080 is a required course for Earth Science majors; an excellent course for anyone requiring a lab credit course or interested in Earth Sciences. This course only requires a minimal background in science and math; no prior geology is required! There are no prerequisites.

Calendar Description

This course focuses on the solid earth (geosphere) and how it evolved throughout Earth's vast history and continues to evolve today. The processes involved are recorded in the rocks and minerals of our earth, and we explore these natural processes and materials as a way to understanding our earth.

Course Outcomes:

- Identify and classify common earth materials and the processes that form them, by interpreting the evidence within the rocks themselves.
- Explain plate tectonic theory and begin to apply the principles in understanding earth materials and processes.
- Describe the essential nature of planet earth in terms of physical and chemical composition, and the distribution of materials within and on earth.
- Identify and explain the basic principles of spatial, temporal, and dynamic thinking about planet earth.
- Begin to develop a questioning approach to interpreting information about the physical earth and "think like a geologist."

Brightspace Learning Management System (LMS):

Online quizzes, important course announcements, and discussion forums are delivered through the Brightspace Learning Management System. Lecture PowerPoint slides will be posted within a week of delivery, but lecture recording will not.

Student Declaration of Absence:

This course has opted into the student declaration of absence in lieu of sick notes for the in-class tests. Please refer to https://bit.ly/2NJS8jw for specific details about the use of the Student Declaration of Absence. This mechanism is meant to substitute for sick notes from a doctor related to short absences (less than three days) and does not provide an automatic exemption from any missed assessments. Accommodating the absence is at the discretion of the course instructor. Student Declarations of Absence are only necessary for the two in class tests (see the dropbox under "Assignments"). SDAs are not required for missed Lab or classes (see below).

Evaluation

Evaluation components	%
Lab Exercises (7 labs)	14
Lab Quizzes (two)	16 (2x8% each)
In class activities	10
Brightspace Quizzes	10
Tests (two)	20 (2x10% each)
Final Exam	30

***Note: You MUST pass BOTH the lab component and the non-lab component to pass the course*. (50% is a passing grade).**

Marks will NOT be reweighted at the end of term. The mark you earn is the mark you receive.

Labs

Labs begin the week of January 20th. All labs are scheduled to be in-person. Due to room capacities, students must attend their assigned lab section. B01: Mondays 11:35-2:35; B02: Mondays 2:35-5:25; and B03: Thursdays 11:35-2:25. Room 2055 Life Sciences Centre.

Optional lab manual: Laboratory Manual for Introductory Geology, Ludman and Marshak (4th Edition) will be available at the bookstore as either E-book or in print. Lab worksheets based on the lab manual will be provided during each lab period. Some students may find it useful to have the lab manual, but the main information to complete the labs will be included in the worksheets. More information will be provided during the first lab session during the week of Jan 20th.

The labs are worth a total of 30% of the course grade. Seven lab exercises account for 14% and two in-lab rock and mineral identification quizzes account for 16%. Lab exercises will be completed in small groups and will be graded and returned at the beginning of the following lab period.

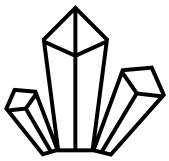
Labs will be introduced at the beginning of each lab period, a handout will be provided, and labs are designed to be completed in the 3-hour lab period. Most labs are completed as group exercises. If you require more time, labs will be accepted up to 24 hours after your assigned lab period, but you will need to coordinate with your lab partners. Beyond the 24-hour grace period, labs will be penalized 10%/day up until the following lab period when they will not be accepted.

Students who cannot attend lab periods in-person due to illness will be given extra time on a case-by-case basis. Contact the lab instructor before the lab period to make alternate arrangements. Lab quizzes are scheduled for the weeks of March 3rd and 31st.

Online quizzes
Throughout the term there will be short weekly online quizzes in BrightSpace. Each of these activities will be weighted equally. There will **be no make-up.**

In class activities
Throughout the term there will be activities and quizzes during class time. These are intended to aid your learning. Each of these activities will be weighted equally. The best 85% of these make up your mark for this component to accommodate absences; there will **be no make-up for in class-activities.** No SDA is necessary.

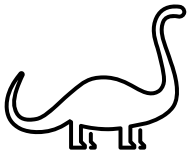
Tests
There will be two tests, worth 10% each. These are "in class" and "closed book" tests. The dates are February 6th and March 4th. You will need to bring a pen or pencil. Any other requirements will be announced in class and on BrightSpace. There are no make up tests; if you miss a test due to illness, family emergency, or other acceptable reason, the exam will have a higher value (40%). Missed tests require a Student Declaration of Absence (see above).



Final Exam
The Faculty of Science requires all first-year science classes to have a formal exam (April 9th -26th). **Do not make travel arrangements until after the exam schedule is posted** in early February. Accommodations **will not be made** for students who leave before the scheduled exam. The final exam is cumulative. The exam will be in person and closed book. Required materials for the exam will be announced in class and on BrightSpace.

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

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



Week of	Lectures (TR)	Labs (M/R)	Other
Jan 6	Introduction to Earth Sciences and Plate Tectonics	No Labs	
Jan 13	Plate Tectonics	No Labs	
Jan 20	Minerals	Lab 1 – Plate Tectonics	
Jan 27	Minerals and Magma Formation	Lab 2 – Minerals Part 1	
Feb 3	Igneous Rocks	Lab 3 – Minerals Part 2	Feb 6th: Test 1 (Plate Tectonics, Minerals, and Melt formation)
Feb 10	Igneous and Sedimentary Rocks	Lab 4 – Igneous Rocks	
Feb 17	**Study Break**	**Study Break**	
Feb 24	Sedimentary Rocks	No Labs	
Mar 3	Depositional Environments	Lab Quiz 1 (Minerals)	Mar 4th:Test 2 (Plate Tectonics: Igneous and Sedimentary Rocks)
Mar 10	Metamorphism	Lab 5 – Sedimentary Rocks	
Mar 17	Metamorphism and Structure	Lab 6 – Metamorphic Rocks	
Mar 24	Structural Geology and Geologic Time	Lab 7 – Geol Time/Structure	
Mar 31	Geologic Time and Earthquakes	Lab Quiz 2 (All Rocks)	
Apr 9-26	Exam: Date TBD		Cumulative Exam

***Lecture dates are subject to change.**

Faculty of Science
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/dept/university_secretariat/policies/academic/classroom-recording-protocol.html
Dalhousie Grading Practices Policies: https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html
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/dept/university_secretariat/policies/health-and-safety/sexualized-violence-policy.html
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/about-dal/agricultural-campus/ssc/academic-support/advising.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
Indigenous Connection: https://www.dal.ca/about-dal/indigenous-connection.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://cdn.dal.ca/content/dam/dalhousie/pdf/academics/UG/indigenous-studies/Elder-Protocol-July2018.pdf
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/dept/vpei/edia/education/community-specific-spaces/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/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html
Human Rights and Equity Services: https://www.dal.ca/dept/hres.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