

Faculty of Science Course Syllabus

Department of Earth Sciences

ERTH 1080.01-CRN: 21089

ERTH 1080 B01-CRN: 21090

ERTH 1080 B02-CRN: 21091

Geology I

Winter 2020

Instructor: Isabelle Coutand icoutand@dal.ca LSC 3015**Teaching assistants (labs):** Catherine Evans, Philip Sedore**Lectures:** 1:05-2:25 pm on Tuesdays and Thursdays LSC Common Area C338**Laboratories:** Seven labs, three hours each. 11.35am-02.25pm/02.35pm-5.25pm LSC B2055**Tutorials:** N/A

Submit course syllabus to your Department office for posting on the Dept website prior to the start of term
Submit requests for final exam exemptions (1000, 2000 and 3000 level courses only) to the Dean's office at
least 2 weeks prior to the start of term

The following information should be included, as a minimum, in every course syllabus.

Course Description

This class focuses on the solid earth (geosphere), how it was formed and how it evolved through time. This class explores the materials constituting the geosphere and the natural processes driving their formation. Specifically, we will explore (1) the physical processes that led to the formation of the planet Earth and its place in space and time within the Universe, (2) the structure of the Earth and its dynamic aspect (plate tectonics and consequences), (3) the different types of rocks and the way they form and are deformed, (4) the topography of continents and the formation of mountain ranges, (5) the mechanisms and examples of two major geological hazards: volcanic eruptions and earthquakes and (6) how time is measured at geological timescales.

Course Prerequisites

This class meets the needs of students who require a science class with a lab component, is a required prerequisite class for all Earth Science majors, and serves as an introduction for all those interested in Earth Sciences. No previous knowledge of geology is required.

Course Objectives/Learning Outcomes

- 1- Acquire a basic understanding of how planet Earth was formed and works.
- 2- Acquire scientific reasoning: from the observation of natural facts to their interpretation in terms of processes.

Required Course Materials

- Stephen Marshak, *Earth – portrait of a planet, 5th or 6th Edition*, W.W. Norton & Company, New York + Lab manual – all should be available at the library.

Course Assessment

- 25 February: Mid-Term Exam (course)
- 30 March: Lab Quiz
- 08-24 April: Final Course Exam scheduled by the Registrar’s Office

NOTE: An exemption is required for 1000 to 3000 level courses if you are not planning to hold a final exam scheduled by the Registrar’s Office. Submit your syllabus along with your request (**and reason for the request**) to the Assistant Dean (scieast@dal.ca) at least 2 weeks prior to the start of classes.

Component	Weight (% of final grade)	Date
Tests/quizzes:	20%	(Mid-Term exam)
Final exam	35%	(Scheduled by Registrar)
Assignments (list)	15%	There will be 2 assignments, each count for 50% of the assignment mark
Labs:	30%	

Other course requirements

List

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)		

Course Policies

Late assignments will result in a 10% per day penalty. If already marked and returned, late assignments will not be accepted. Work in-group is recommended. **However, answers must be worded and formulated individually. Too similar papers will be considered as plagiarism.**

Missed assignments or exams will be rescheduled upon reception of a medical doctor certificate

Weather-related cancelled classes will be rescheduled pending available time and space.

Course Content

- 1- Internal structure of the Earth 1
- 2- Internal structure of the Earth 2
- 3- Paleomagnetism and spreading seas.
- 4- Plate tectonics 1.
- 5- Plate tectonics 2.
- 6- Minerals 1.

- 7- Minerals 2.
 - 8- Sedimentary rocks 1.
 - 9- Sedimentary rocks 2.
 - 10- Igneous rocks 1.
 - 11- Igneous rocks 2.
 - 12- Volcanoes.
 - 13- Metamorphic rocks 1.
 - 14- Metamorphic rocks 2.
 - 15- Deformation of the crust 1.
 - 16- Deformation of the crust 2.
 - 17- Chronology and timescale in Geology.
 - 18- Geochronology
 - 19- Earthquakes 1.
 - 20- Earthquakes 2.
 - 21- Fossils and mass extinctions
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ACCOMMODATION POLICY FOR STUDENTS

Students may request accommodation as a result of barriers related to disability, religious obligation, or any characteristic protected under Canadian Human Rights legislation. **Student Accommodation Policy:** http://www.dal.ca/campus_life/student_services/academic-support/accessibility.html

Students who require accommodation for classroom participation or the writing of tests and exams should make their request to the **Advising and Access Services Centre (AASC)** prior to or at the outset of the regular academic year. More information and the **Request for Accommodation** form are available at www.dal.ca/access.

ACADEMIC INTEGRITY

Academic integrity, with its embodied values, is seen as a foundation of Dalhousie University. It is the responsibility of all students to be familiar with behaviours and practices associated with academic integrity. Instructors are required to forward any suspected cases of plagiarism or other forms of academic cheating to the Academic Integrity Officer for their Faculty.

Policy on Intellectual Honesty and Faculty Discipline Process:

https://www.dal.ca/dept/university_secretariat/academic-integrity.html

STUDENT CODE OF CONDUCT

Dalhousie University has a student code of conduct, and it is expected that students will adhere to the code during their participation in lectures and other activities associated with this course.

http://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

COPYRIGHT

All members of the Dalhousie community are expected to comply with their obligations under Canadian copyright law. Dalhousie copyright policies and guidelines, including our Fair Dealing Guidelines, are available at <http://www.dal.ca/dept/copyrightoffice.html>.

SERVICES AVAILABLE TO STUDENTS

The following campus services are available to all Dalhousie students. Unless noted otherwise, the services are free.

Service	Support Provided	Location	Contact
General Academic Advising	Help with <ul style="list-style-type: none"> - understanding degree requirements and academic regulations - choosing your major - achieving your educational or career goals - dealing with academic or other difficulties 	Killam Library Ground floor Rm G28 Bissett Centre for Academic Success	In person: Killam Library Rm G28 By appointment: <ul style="list-style-type: none"> - e-mail: advising@dal.ca - Phone: (902) 494-3077 - Book online through MyDal
Dalhousie Libraries	Help to find books and articles for assignments Help with citing sources in the text of your paper and preparation of bibliography	Killam Library Ground floor Librarian offices	In person: Service Point (Ground floor) By appointment: Identify your subject librarian (URL below) and contact by email or phone to arrange a time: http://dal.beta.libguides.com/sb.php?subject_id=34328
Studying for Success (SFS)	Help to develop essential study skills through small group workshops or one-on-one coaching sessions Match to a tutor for help in course-specific content (for a reasonable fee)	Killam Library 3rd floor Coordinator Rm 3104 Study Coaches Rm 3103	To make an appointment: <ul style="list-style-type: none"> - Visit main office (Killam Library main floor, Rm G28) - Call (902) 494-3077 - e-mail Coordinator at: sfs@dal.ca or - Drop in to see us during posted office hours All information can be found on our website: www.dal.ca/sfs
Writing Centre	Meet with a tutor to discuss writing assignments (lab report, research paper, thesis, poster) <ul style="list-style-type: none"> - Learn to integrate source material into your own work appropriately - Learn about disciplinary writing from a peer or staff member in your field 	Killam Library Ground floor Learning Commons & Rm G25	To make an appointment: <ul style="list-style-type: none"> - Visit the Writing Centre in the Killam Learning Commons (Rm G40) and book an appointment - Call (902) 494-1963 - e-mail writingcentre@dal.ca - Book online through MyDal We are open six days a week See our website: writingcentre.dal.ca