COURSE OUTLINE – GEO 1111 Introduction to Earth Systems (Winter 2019)

Course description

This is a course meant for students in the faculties of Science or Engineering who want to learn more about the origin of our planet Earth, how it evolved throughout its 4.6 billion year history, and how it controls our physical environment through slow but massive tectonic cycles and processes. We will explore important themes such as the materials that compose our planet, the volcanic, erosional and tectonic processes that shape its surface, the origin of life, Earth resources and also document the massive geochemical cycles that operate between the Earth's deep interior and the oceans and atmosphere.

Professor

Dr. David Schneider
Department of Earth & Environmental Sciences
0011 Marion Hall, david.schneider@uottawa.ca
office hours: Wednesday, 10:00-11:30, or by appointment

Course Lectures

Mondays	16:00-17:30	MRN Auditorium
Wednesday	14:30-16:00	MRN Auditorium

Course coordinators & teaching assistants (TAs)

The course coordinator will act as a link between the professors and the students. Please address ALL QUESTIONS related to this course to the course coordinator as they will be able to answer most questions related to the course's organization, content, and evaluation. In addition, they will relay any relevant questions/requests to the professor. The course coordinator and TAs will host office hours for additional assistance with specific questions about lecture material. OFFICE HOURS ARE HELD IN MRN 102.

Coordinator

- **Lindsay Reynolds**
  e-mail: GEO1111@uottawa.ca

Teaching assistants

Name	***e-mail***	***office***	***office hours***
Julian Kang	mkang059@uottawa.ca		
Victor Garcia	vgarc091@uottawa.ca	meet	next
Alexander Hill	ahill075@uottawa.ca	in	page
Nicole Marsh	nmars051@uottawa.ca	MRN 102	
Megan Reich	mreic084@uottawa.ca		
Lindsay Reynold	lreyn028@uottawa.ca		

Office hours schedule - HELD IN MRN 102

Hours	Monday	Tuesday	Wednesday	Thursday	Friday
8:30-9:00				Garcia	
9:00-9:30				Garcia	
9:30-10:00		Reynolds		Garcia	
10:00-10:30		Reynolds	Schneider MRN 0011	Reich	
10:30-11:00		Reynolds	Schneider MRN 0011	Reich	Kang
11:00-11:30			Schneider MRN 0011	Reich	Kang
11:30-12:00					Kang
12:00-12:30					
12:30-13:00					
13:00-13:30			Marsh		
13:30-14:00			Marsh		Hill
14:00-14:30			Marsh		Hill
14:30-15:00			*LECTURE*		Hill
15:00-15:30			*LECTURE*		
15:30-16:00			*LECTURE*		
16:00-16:30	*LECTURE*				
16:30-17:00	*LECTURE*				
17:00-17:30	*LECTURE*				

Tentative course program*

Week	*Day*	*Date*	*Lecture #*	*Topic*	*Q&A*
Week 1	Mon.	Jan. 7	Lecture 1	Introduction	Reich
	Wed.	Jan. 9	Lecture 2	Structure of the Earth	Hill
Week 2	Mon.	Jan. 14	Lecture 3	Earth Materials I	Garcia
	Wed.	Jan. 16	Lecture 4	Earth Materials II	Garcia
Week 3	Mon.	Jan. 21	Lecture 5	Earth Materials III	Garcia
	Wed.	Jan. 23		**EXAM I**	-
Week 4	Mon.	Jan. 28	Lecture 6	Volcanoes	Kang
	Wed.	Jan. 30	Lecture 7	Volcanoes	Kang
Week 5	Mon.	Feb. 4	Lecture 8	Earthquakes	Hill
	Wed.	Feb. 6	Lecture 9	Earthquakes/Tectonics	Hill
Week 6	Mon.	Feb. 11		**EXAM II**	-
	Wed.	Feb. 13		n/a	-
Week 7	*Mon.*	*Feb. 18*		*February reading week*	-
	Wed.	*Feb. 20*		*February reading week*	-
Week 8	Mon.	Feb. 25	Lecture 10	Economic resources	Kang
	Wed.	Feb. 27	Lecture 11	Planets	Reich
Week 9	Mon.	Mar. 4	Lecture 12	Geologic time	Reynolds
	Wed.	Mar. 6		**EXAM III**	-
Week 10	Mon.	Mar. 11	Lecture 13	Mass movements	Reynolds
	Wed.	Mar. 13	Lecture 14	Unstable ground	Reynolds
Week 11	Mon.	Mar. 18	Lecture 15	Streams	Marsh
	Wed.	Mar. 20	Lecture 16	Flooding	Marsh
Week 12	Mon.	Mar. 25		**EXAM IV**	-
	Wed.	Mar. 27		n/a	-
Week 13	Mon.	Apr. 1	Lecture 17	Groundwater	Marsh
	Wed.	Apr. 3	Lecture 18	Glaciers	Reich
final exam		**TBD**		**FINAL EXAM**	

**Schedule subject to change*

Course Evaluation

Exam I	20%
Exam II	20%
Exam III	20%
Final exam	40% (50% new material + 50% cumulative)

Note there are 4 exams during the term, yet the evaluation is for only 3 exams (+ final). Your lowest mark of the 4 in-term exams will be dropped, unless you miss an exam, then that missed exam (0%) is dropped from the evaluation.

Missed exams

You are encouraged to review the University of Ottawa's policy on missed exams, as all the rules outlined will be applied:

https://www.uottawa.ca/administration-and-governance/academic-regulation-9-evaluation-of-student-learning

There will be **no make-up exams** for this course. If you miss 1 exam, then that 1 missed exam (0%) is dropped from the evaluation. If you have a valid excuse for missing more than 1 exam, the percent value of the missed exam will be equally redistributed and added to the percent values of other exams.

According course regulations, examinations must be taken on the day and time designated, unless there is a serious personal illness, accident or death in the immediate family (parent, child, brother, sister, spouse or grandparent), or an extraordinary situation (e.g. major sport or art competition). The student must notify us by email and provide physical documented evidence of the reason for missing the examination **within a week before or after the exam date**. Acceptable documentation is as follows: a doctor's statement in case of personal illness,

an accident report in the case of an accident, an obituary or funeral program in the case of death in the immediate family, or any additional proof.

Course Expectations

Read requested assignments before lecture, come to class, take good notes, keep current with the course's website and ask questions. We have no tolerance whatsoever for academic fraud and we will be vigilant.

Virtual Campus

Material related to this course (pdfs of lectures, Q&A sheets, etc.) will be posted on the Virtual Campus portal (Brightspace) on the University of Ottawa web site. For any problems regarding access to the course material via Virtual Campus, please contact Teaching and Learning Support Service.

In addition to course content, this is an efficient way to communicate with other students registered in the class, TAs, and course coordinators. We will periodically post notices and changes on the course site, as well as all exam marks.

Textbook

No book is required for this course, but any Physical Geology or Introduction to Earth Science book would be adequate. There are many editions, and they all contain the same information. Moreover, searching the internet is free!

Suggested textbooks (available at the Morisset Library)

Tarbuck, Lutgens, & Tasa (2013). EARTH – An introduction to physical geology – 11th edition. Pearson/Prentice Hall.

Tarbuck, E.J., Lutgens, F.K., Tsujita, C.J. (2005). EARTH – An introduction to physical geology, Canadian edition. Prentice Hall.
CALL# QE 28.2.T37

Smith, G.A., Pun, A. (2006). How does Earth work? Physical geology and the process of science. Pearson/Prentice Hall.
CALL# 28.2 S59

Grotzinger, J., Jordan, T.H., Press, F., Siever, R. (2007). Understanding Earth – 5th edition. Freeman.
CALL# QE 28.P9

Stanley, S. M. (1999). Earth System History. Freeman.
CALL# QE 28.3.S735

Hamblin, W. K. (1998). Earth's dynamic systems. Prentice Hall.
CALL# QE 28.2.H35

Thompson, G. R. (1993). Modern physical geology. Saunders College Pub.
CALL# QE 28.2.T5

Skinner, B. J. (2004). Dynamic earth : an introduction to physical geology. John Wiley & Sons.
CALL# QE 28.2.S55