

NATURAL DISASTERS COURSE OUTLINE

ERTH2415 – Fall 2018

COURSE OBJECTIVES

1. Explain the energy sources associated with natural disasters.
2. Relate the physical characteristics of a natural disaster to the energy source.
3. Analyze the impact of natural disasters on people and infrastructure.
4. Outline the mitigation strategies applied to minimize the impact of natural disasters.
5. Explain the relationship between plate tectonics and earthquakes, volcanoes, and tsunamis.

A secondary objective is to learn how to extract information from maps, geological cross-sections, and graphs.

IMPORTANT INFORMATION

Instructor: Dr. Jason Mah (JasonMah@cunet.carleton.ca)

TA: To be determined

Lectures: This is course offered with both in-class lecture and online video. You may following the class lectures in the following ways:

1. In-class lecture: Fridays, 2:35pm to 5:25pm, 103 SC

2. CUOL Web Channel

CUOL will play a recorded video of the lecture on their web channel.

<https://vod.cuol.ca/stream/web-channel>

Sun. 1115 – 1330

Mon. 2245 - 0130

3. Video on Demand (VOD)

For a subscription fee, \$50, you can access the recorded video of the lecture at any time.

<https://vod.cuol.ca/vod>

4. CUOL Student Centre (Loeb D299)

Kiosks available to view each lecture for free. Available 24 hours a day, 7 days a week

Availability: 1. No office hours are offered as this course is online. Please email me directly if you would like to meet in person or via WebEx.

2. I am always accessible via email. I will attempt to reply within 24 hours.

3. TA will be offering office hours each week.

IMPORTANT DATES

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|---------------------------------|-------------------------------|
| 1. September 05 | Fall term begins |
| 2. September 21 to 26 | Quiz 1: Lectures 1 – 6 |
| 3. October 12 to 17 | Quiz 2: Lectures 7 – 11 |
| 4. October 22 to 26 | Fall break. Classes suspended |
| 5. November 02 to 08 | Quiz 3: Lectures 12 – 15 |
| 6. November 03, 06:00– 08:00 PM | Midterm at Carleton |
| 7. November 23 to 28 | Quiz 4: Lectures 16 – 21 |
| 8. December 7 | Fall term ends |
| 9. December 9-21 | Final exams |

SCHEDULE

Date	Lecture #	Lecture Topic	Quiz Info
Sep 07	1	Introduction	
	2	Plate tectonics	
Sep 14	3	Disaster and emergency management (guest)	
	4	Plate tectonics and earthquakes	
Sep 21	5	What happens during an earthquake?	Quiz 1
	6	Earthquakes, people and infrastructure	Lectures 1-6
Sep 28	7	Tsunami	Sept 21 - 26
	8	Plate tectonics and volcanoes	
Oct 05	9	Eruptive style and landforms I	
	10	Eruptive style and landforms II	
Oct 12	11	Active volcanism now! (guest)	Quiz 2
		Review before exam #1	Lectures 6-11
Oct 19		No class, enjoy the break!	Oct 12 - Oct 17
Fall Break: Oct 22 - 26			
Oct 26	12	Geomagnetic hazards	
	13	Impacts with space objects	
Nov 02	14	Great Canadian impact tour	Quiz 3
	15	Mass movements I	Lectures 12-15
Midterm: Saturday Nov 03, 06:00PM to 08:00PM. Written on campus.			Nov 02 - Nov 08
Nov 09	16	Mass movements II	
	17	Snow avalanches	
Nov 16	18	Severe Weather	
	19	Floods	
Nov 23	20	Floods 1 (guest)	Quiz 4
	21	Floods 2 (guest)	Lectures 16-21
Nov 30	22	Hurricanes	Nov 23 - Nov 28
		Review before exam #2	
Dec 07	Last day of classes		
Final Exam period: Dec 09 - 21			

CU LEARN

All course material and administration will be conducted through CU Learn. This includes the online quizzes, announcements, and grades.

In case of problems with CU Learn, go to the [support page](#).

TEXTBOOK

Mandatory. The textbook will be referenced in the quizzes.
The textbook is electronic, there are no hard copies available.

Abbott, P.L. and Samson, C. 2015 (4th Edition). Natural Disasters – Canadian Edition. McGraw Hill Ryerson,

You will need to use this link:

<http://connect.mheducation.com/class/j-mah-fall-2018>

Lecture notes follow the book closely, but the book includes further examples.

EVALUATION

The course consists of 4 Quizzes and 2 Exams. Attendance of both exams is mandatory to pass the course. The following table presents the course evaluation.

Evaluation			
On-line quizzes	Quiz #1	Lectures 1-6	5 %
	Quiz #2	Lectures 7-11	5 %
	Quiz #3	Lectures 12-15	5 %
	Quiz #4	Lectures 16-21	5 %
Exams	Exam #1	Lectures 1 to 11 inclusive	40 %
	Exam #2	Lectures 12 to 22 inclusive	40 %
TOTAL			100 %

QUIZZES

- Quizzes are taken via CuLearn and will take 1-2 hours.
- Should you experience problems during your Quiz:
 - Note the time.
 - Take a screenshot of the problem.
 - No accommodation will be made to waive or redo a Quiz unless supporting or substantiating documentation is provided.
- Quizzes will refer to the lecture, textbook, and websites.
- I encourage you to work in teams but each student must submit their own Quiz.

EXAMS

- Attendance of both exams is mandatory.
- Local students, living within 100km of Carleton, write their exams on campus.
- Distance students, living over 100km from campus, will write exams at either a Carleton University Test Centre or may apply to write the exam at distance with a proctor.
 - Distance students should apply through [CUOL](#) immediately.
- Deferred exams:
 - All missed exams must be substantiated with a medical note or other official documents for a deferred exam to be granted.
 - A document supporting your absence must be submitted within 5 business days of the exam. Failure to do so may result in 0% in your exam.

ACADEMIC INTEGRITY

It is your responsibility to review Carleton's policy on Academic Integrity - Section 14 of the Calendar.

<http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/acadregsuniv14/>

ACCOMODATION

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

<https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline