

" Natural Hazards "
(EES B18 H3 F)

Instructor: Dr. Jovan R. Stefanovic

Office: EV 402

Lecture: Tuesday 6 –9pm (MW120)

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Office hours: Tuesdays 4:00-5:00 pm
(starting Sept.13)

Textbook: **Natural Disasters**, Abbott/Samson, 2015 3ce, McGraw-Hill Ryerson

Grading:

Assignment (proposal (5%) and presentation (10%):	15%
Participation (5x1%)	5%
Best 4 Quizzes x 5%	20 %
Mid-term Examination:	25%
Final Examination:	35%

Intent of the course:

This course examines natural hazards that impact humans and ways that human activity impacts the natural environment. Natural disasters are the extreme of natural hazards in which a large amount of energy is released in short period of time with catastrophic consequences for life and infrastructure. This course emphasizes Earth and atmospheric hazards. Dangers fuelled by Earth's internal energy are addressed in lectures on a plate- tectonic theme, including earthquakes, tsunami and volcanic eruptions. The lectures discussing mass movements and snow avalanches address hazards powered by gravity. Some topics focus on the impacts of weather and climate – related environmental hazards. These topics include river flooding, tornados, thunderstorms, hurricanes and winter-related hazards. The last lecture examines the great dyings and impact mechanisms with asteroids and comets. The course intends to stimulate student interest in geoscience and makes it clear that the atmospheric and earth science are directly relevant to their daily lives.

COURSE LEARNING OBJECTIVES:

1. Understand triggering mechanisms for various natural hazards.
2. Examine the energy sources underlying natural disasters.
3. Recognize links between natural hazards.
4. Discuss society's response to natural disasters.
5. Recommend various mitigation strategies for controlling natural hazards.

Tentative Course Schedule and Readings: Readings are from your course textbook: Abbott and Samson (2015).

Students should note that topics may span more than one lecture period

Week

LECTURE TOPICS

1. An overview of the course, expectations, and objectives.
A quick look at the textbook
Introduction to Natural Disasters Ch.1Sep. 6th
2. Plate Tectonics Ch. 2Sep. 13th
(Presentation Topics Selection)
3. Earthquakes Chs. 3 and 4**Sep. 20th**
Quiz 1 (carried out at the start of class, material from week1 and 2)
4. Volcanoes and Tectonics Chs.6 and 7Sep. 27th
5. Tsunamis Ch.7**Oct. 4th**
Quiz 2 (carried out at the start of class, material from week 3 and 4)
Due Start of Class: Student Proposal for Presentation
6. Thanksgiving Day- Reading week - University closedOct. 11th
7. **Midterm Examination** (during class time).....**Oct.18th**
8. Mass Movements and Snow Avalanches (Ch.13)..... Oct.25th
9. Floods Ch. 11**Nov. 1st**
Quiz 3 (carried out at the start of class, material from week 5 & 8)
Student Presentations (carried out from 8 to 9pm)
10. Hurricane and Severe Weather (Chs.9&10)**Nov. 8th**
Student Presentations (carried out from 8 to 9pm)
11. Climate Change(Ch.8) and Asteroids / Mass Extinction (Chs.14&15)**Nov. 15th**
Quiz 4 (carried out at the start of class, material from week 9 & 10)
Student Presentations (carried out from 8 to 9pm)
12. **Student Presentations**.....**Nov. 22nd**
13. **Student Presentations** and Course review **Nov.29th**
Quiz 5 (carried out at the start of class, material from week 11)

ASSIGNMENT

There are no tutorials in this course. You will have only one assignment which you will present in the last five weeks of the term. The term assignment has been designed to encourage students to perform literature research and communicate findings in writing and oral presentations. The assignment is divided into three parts: topic selection, proposal paper and presentation. Students will be divided into teams (2-3 students per team) and you will be evaluated on research content, organization, writing and presentation skills. Proposal paper should be maximum one page for written part plus an additional page for figures or analytical part. Your paper should clearly indicate origin (triggering mechanisms), consequences and critical thinking review of existing and proposed mitigation strategies for the selected natural disaster. You must recommend various hazard management methods/approaches and clearly indicate why they should be successful for future natural hazards. Your proposal should be well organized, well referenced with a complete list of sourced materials (APA reference format). Please proofread your paper in order to correct any faulty grammar and punctuation. Marking will be based on scientific merit/content, style, and organization.

When you get your topic (randomly selected) on Sep.13 you will also get the day for your presentation. The presentations will start on Nov.1 and they will continue weekly until the end of the term (five presentation days in total). Marking for the presentation will be based on scientific content, organization and presentation skills. During the presentation **students in class** should be also engaged, you need to write down notes from presentations and if time permit participate in the discussion. At the end of the class you will submit these notes along with your name and student number. The note content will be graded as a participation mark (5% in total for all five presentation days). More details on the assignment will be circulated during the term.

You should use a word processor for your written responses. Your document should conform to the following: 25.4 mm margins, single-spaced, 12-point print size. The document must bear a name, signature, student number and date. Analytical parts may be handwritten.

Assignment :	Topic selection	Proposal	Students Presentation
	Sept. 13 th	Oct. 4 th	Nov.1 st - Nov.29 th

Late assignment proposal: The late penalty is as follows: 1 day 5%, 2 day 10%, 3 day 15%, 4 day 20%, 5 day 25%, 6 day 30% and 7 day and after 100%.

EXTENSION WILL BE GRANTED ONLY WITH OFFICAL UTSC MEDICAL NOTE or under some very serious circumstances.

If you need to miss a practical or term test for any legitimate reason, you must submit appropriate documentation within five business days of your absence. If the reason for your absence is medical, an official UTSC medical note must completed by a doctor who examined you while you were ill/injured. The medical note can be downloaded at:

http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf.

You must submit appropriate documentation within five business days of your absence.

MID-TERM EXAMINATION

The midterm is based on material covered in lectures and readings up to and including the class before the midterm exam. The 2-hour mid-term examination will be held on October 18 (6 to 8pm) in class. The exam will be multiple-choice and true-false questions and will be worth 25% of the final grade.

MISSED TEST

Make-ups will not be given for the mid-term test. If you miss the test with a verifiable reason (i.e. you have a Doctor's note or have made provisions for a VERY good reason with the professor PRIOR to the mid-term), the weight of the mid-term will be added to the weight of your final exam. If you simply "miss" the mid-term, you will receive a mark of zero for it. If the reason is medical, an official UTSC medical note must be completed by a doctor who examined you while you were ill/injured. The medical note can be downloaded at: http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf. You must submit appropriate documentation **within five business days of your absence.**

FINAL EXAMINATION

The 2-hour final examination will be held during the final examination period, exact time, date and rooms TBA. The exam is worth 35% of the final grade. It will be a combination of multiple choice, and true-false questions. The final exam will be based on selected term material (including readings and lectures).

ACCESSIBILITY STATEMENT

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services Office as soon as possible. I will work with you and AccessAbility Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC AccessAbility Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. (416) 287-7560 or ability@utsc.utoronto.ca.

STUDENT CODE OF CONDUCT

Please arrive promptly for lecture and do not forget to turn off cell phones. You are fully expected to abide by the Code of Student Conduct as set out by The Governing Council at the University of Toronto (<http://www.utoronto.ca/govcncl/pap/policies/studentc.html>). This document defines the standards by which students are to conduct themselves within class and within the University community at large. Please be advised that misconduct of any form will not be tolerated in this class. This includes plagiarism on quizzes, assignment, and exams, which will be strictly enforced and is easily detected. Please consult the University Calendar for information about grade distribution and academic conduct. All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see <http://www.utoronto.ca/academicintegrity/>). If you have further questions regarding what constitutes plagiarism or other academic offenses, feel free to speak with Prof. Stefanovic.

Note:

Check Blackboard regularly. All announcements, lecture notes, assignment and midterm marks and other information will be posted on the Blackboard.