



ORIGINAL COURSE IMPLEMENTATION DATE: September 2008
 REVISED COURSE IMPLEMENTATION DATE: January 2017
 COURSE TO BE REVIEWED: (six years after UEC approval) September 2022
 Course outline form version: 09/15/14

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: GEOG 105	Number of Credits: 3 Course credit policy (105)																
Course Full Title: Natural Hazards and Hollywood																	
Course Short Title (if title exceeds 30 characters):																	
Faculty: Faculty of Social Sciences	Department (or program if no department): Geography and the Environment																
Calendar Description: This course will consider the science, evolution, human preparedness, and the management of recovery from natural hazards (hurricanes, earthquakes, and diseases). In part this information will be used to assess how accurately film and television portray the science, preparedness, and response to these events.																	
Prerequisites (or NONE):	None.																
Corequisites (if applicable, or NONE):																	
Pre/corequisites (if applicable, or NONE):																	
Equivalent Courses (cannot be taken for additional credit) Former course code/number: Cross-listed with: Equivalent course(s): <i>Note: Equivalent course(s) should be included in the calendar description by way of a note that students with credit for the equivalent course(s) cannot take this course for further credit.</i>	Transfer Credit Transfer credit already exists: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Transfer credit requested (OReg to submit to BCCAT): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (if yes, fill in transfer credit form) Resubmit revised outline for articulation: <input type="checkbox"/> Yes <input type="checkbox"/> No To find out how this course transfers, see bctransferguide.ca .																
Total Hours: 45 Typical structure of instructional hours: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr><td>Lecture hours</td><td style="text-align: center;">45</td></tr> <tr><td>Seminars/tutorials/workshops</td><td></td></tr> <tr><td>Laboratory hours</td><td></td></tr> <tr><td>Field experience hours</td><td></td></tr> <tr><td>Experiential (practicum, internship, etc.)</td><td></td></tr> <tr><td>Online learning activities</td><td></td></tr> <tr><td>Other contact hours:</td><td></td></tr> <tr><td style="text-align: right;">Total</td><td style="text-align: center;">45</td></tr> </table>	Lecture hours	45	Seminars/tutorials/workshops		Laboratory hours		Field experience hours		Experiential (practicum, internship, etc.)		Online learning activities		Other contact hours:		Total	45	Special Topics Will the course be offered with different topics? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, different lettered courses may be taken for credit: <input type="checkbox"/> No <input type="checkbox"/> Yes, repeat(s) <input type="checkbox"/> Yes, no limit <i>Note: The specific topic will be recorded when offered.</i> Maximum enrolment (for information only): 36 Expected frequency of course offerings (every semester, annually, every other year, etc.): Annually
Lecture hours	45																
Seminars/tutorials/workshops																	
Laboratory hours																	
Field experience hours																	
Experiential (practicum, internship, etc.)																	
Online learning activities																	
Other contact hours:																	
Total	45																
Department / Program Head or Director: Steven Marsh	Date approved: March 22, 2016																
Faculty Council approval	Date approved: April 29, 2016																
Campus-Wide Consultation (CWC)	Date of posting: n/a																
Dean/Associate VP:	Date approved: April 29, 2016																
Undergraduate Education Committee (UEC) approval	Date of meeting: September 30, 2016																

Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Describe the use of the scientific method to tackle real-world problems.
2. Explain the conceptual and methodological frameworks for the examination of natural hazards.
3. Articulate the common human dimensions of natural hazards including perception of risk, preparedness for events, reduction of risk, and the management of recovery.
4. Contrast real-world case studies with those depicted in film and television.
5. Explain how the portrayal of events on film and television can influence public understanding, public preparedness and associated policy decisions.
6. Demonstrate competence in communicating natural hazard concepts using various scientific methods including written, numeric, graphic, and oral.
7. Describe the assessment of a landscape for the purpose of land-use planning, so as to know where not to build a house.
8. Identify sources for information on natural hazards and to use this information to assess risk, preparedness, and recovery from natural hazards.
9. Identify sources for information on natural hazards in order to critically evaluate the portrayal of natural hazards in film.
10. Explain the ethical issues surrounding natural hazard risk and preparedness.
11. Apply the concepts of risk, vulnerability, and preparedness to their personal situations

Prior Learning Assessment and Recognition (PLAR)

Yes No, PLAR cannot be awarded for this course because

Typical Instructional Methods (guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion)

Lectures, seminars, assigned readings, discussion groups, and A/V presentations.

Grading system: Letter Grades: Credit/No Credit: Labs to be scheduled independent of lecture hours: Yes No

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Text(s) and Resource Materials (if more space is required, download Supplemental Texts and Resource Materials form)

Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1. Keller, E.A., D.E. DeVecchio, and J.J.Clague	Natural Hazards. Earth's Processes as Hazards, Disasters, and Catastrophes. Third Canadian Edition.	<input type="checkbox"/>	Toronto: Pearson Education Canada	2015
2. Hyndman, D. and D. Hyndman	Natural Hazards and Disasters, 5 th Edition	<input type="checkbox"/>	Toronto: Nelson	2017
3. Abbott, P.L. and C. Samson	Natural Disasters, Third Canadian Edition	<input type="checkbox"/>	Toronto: McGraw-Hill.	2015
4.		<input type="checkbox"/>		
5.		<input type="checkbox"/>		

Required Additional Supplies and Materials (software, hardware, tools, specialized clothing, etc.)

None

Typical Evaluation Methods and Weighting

Final exam:	20%	Assignments:	60%	Midterm exam:	20%	Practicum:	%
Quizzes/tests:	%	Lab work:	%	Field experience:	%	Shop work:	%
Written Assignments:	%	Other:	%	Other:	%	Total:	100%

Details (if necessary):

Written Assignments (2-3) 40-60%
Report(s) 20%
Exams 20-40%

Typical Course Content and Topics

1. Introduction to the study of natural hazards. An overview of the terminology used in the study of natural hazards and the categories of geophysical, hydrometeorological and biological hazards. Introduction of the depiction of hazards and disasters in film.
 - a. Assignment: Apply knowledge of personal preparedness for potential hazards.
 - b. Film clips: The Last Days of Pompeii (1913) and 2012 (2009).
2. Concepts of risk and vulnerability. The dimensions of hazards and the factors that influence risk are introduced.
 - a. Assignment: Assess your personal risk, what hazards can impact you where you live?
 - b. Film Clips: The Last Days of Pompeii (1935), San Francisco (1936), The Rains Came (1939).
3. Response and adjustment to natural hazards. Introduction to the hazards associated with Earthquakes.

- a. Assignment: Compare the earthquake hazard in Vancouver to that of one of the following: San Francisco, Los Angeles, Tokyo, or Mexico City.
 - b. Film Clips: The Monster that Challenged the World (1957), Panic in the Streets (1950), When Worlds Collide (1951).
4. Basics of earthquakes. Comparison of magnitude and intensity of events. Seismic waves and the location of epicentres and preparedness and response to recent events. Importance of intervening conditions and application to Mexico City, San Francisco, and Vancouver. How do we predict earthquakes?
 - a. Assignment: Quantitative analysis of the magnitude and intensity of real world events. Location of epicentres using the travel times of seismic waves.
 - b. Film Clips: Earthquake (1974), Andromeda Strain (1971), When Time Ran Out (1979).
5. Basics of volcanic hazards. Where do we find volcanoes? What are the hazards associated with volcanic eruptions and how could they impact the lower mainland? How do we adjust to volcanic hazards?
 - a. Assignment: Explain how two past eruptions impacted global climate: Toba and Tambora.
 - b. Film Clips: Domsday Prophecy (2012), Dante's Peak (1997).
6. Volcanoes continued, introduction to biological hazards. Past pandemics including the plague, cholera and influenza discussed.
 - a. Assignment: Discuss what was done in Canada to prepare for and respond to recent biological hazards: select two of the following Ebola, SARS, Bird Flu, Swine Flu, Lyme Disease, measles, aids, West Nile.
 - b. Film Clips: The Stone Raft (2002), Volcano (1998).
7. Biological hazards continued and the basics of mass wasting hazards. Overview of inorganic poisons in our environment. Types of mass wasting events and examples of where these events occur. How can we adjust to these events, importance of land use planning?
 - a. Assignment: Apply your knowledge of the risk from hazards to determine the safest location for you to reside, explain your reasoning.
 - b. Film Clips: Fatal Contact: Bird Flu in America (2006), Outbreak (1998).
8. Basics of Floods. What are the causes of floods? How do we adjust and respond to the threat from floods?
 - a. Assignment: Quantitative analysis of the Frank Slide in 1903 and flood frequency analysis.
 - b. Film Clip: The River (1984).
9. Basics of severe weather hazards: thunderstorms. Overview of hazards: lightning, hail, microbursts, tornadoes, flooding rains, snow, dust storms, drought, heat waves, cold spells, and freezing rain. How do we adjust and respond to these hazards?
 - a. Assignment: Investigate the historic floods of the Red River. What responses were undertaken to the 1997 flood?
 - b. Film Clips: Day After Tomorrow (2004), Lightning Fire from the Sky (2000), Twister (1996).
10. Basics of coastal hazards including tropical cyclones and tsunamis. How do tropical cyclones form and what are the associated hazards? Formation and threat of coastal erosion and the impact from tsunamis.
 - a. Assignment: Conduct research on two storm chasers and report on their background and how they have contributed to the science of tornadoes and severe thunderstorms.
 - b. Film Clips: Category 6: Day of Destruction (2004), Tidal Wave (2009), Tsunami: The Aftermath (2007), Hurricane (1979).
11. Basics of extraterrestrial hazards. Overview of solar flares and the impact of objects from space. Relationship to extinction events of the geologic past, threat in the future.
 - a. Assignment: Report on either Sandy or Katrina as to their impact and the recovery from these events.
 - b. Film Clips: Deep Impact (1998), Force of Impact (2005).