



Michigan Technological University

**GE4150– Natural Hazards
GE5150 – Advanced Natural Hazards
Course Syllabus, Fall 2016**

Instructor Information

Instructor: Greg Waite, Associate Professor
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Office Hours: MW 10:00am – 12:00pm or by appointment

Course Identification

Course Number: GE4150/GE5150
Course Name: Natural Hazards/Advanced Natural Hazards
Course Location: Lecture: Dow 610 Lab: Forestry 146
Class Times: MWF 1:05 pm – 1:55 pm
Prerequisites: GE2000 or GE2100, and junior or senior standing for GE4150, graduate standing for GE5150

Course Description/Overview

The class explores the causes and mitigation of a range of natural hazards and their impacts on society, including the concepts of risk and risk perception. An emphasis will be placed on volcanoes, earthquakes, and floods and their related hazards; current activity will be investigated as it happens. In addition to technical aspects of these hazards, we will examine the agencies that are responsible for hazard mapping, warnings, and planning.

Course Learning Objectives

At the conclusion of the course, students will be able to articulate the key concepts in social aspects of hazard and risk; evaluate flooding, landslide, volcanic and earthquake hazards using publicly available data; and will have mastered basic concepts in hazard mapping using ArcGIS.

Course Resources

Online resources

- Canvas course website: <http://www.courses.mtu.edu/courses/>
- Personal website <http://www.geo.mtu.edu/~gpwaite>

Required Course Text

- *Environmental Hazards* (2013) by Keith Smith (6th edition), Routledge Publishing. Earlier editions are also OK.

Optional Course Texts

- Technical papers will be assigned.

Grading Scheme

Grading System

Letter Grade	Range		
A	100%	to	92%
AB	< 92%	to	88%
B	< 88%	to	80%
BC	< 80%	to	78%
C	< 78%	to	70%
CD	< 70%	to	68%
D	< 68%	to	60%
F	< 60%		
I	Incomplete; given only when a student is unable to complete a segment of the course because of circumstances beyond the student's control.		
X	Conditional, with no grade points per credit; given only when the student is at fault in failing to complete a minor segment of a course, but in the judgment of the instructor does not need to repeat the course. It must be made up by the close of the next semester or the grade becomes a failure (F). A (X) grade is computed into the grade point average as a (F) grade.		

Grading Policy

Grades will be based upon homework & written responses to reading (25%), lab assignments (35%), class participation (10%), midterm (15%) and final exams (15%).

Late Assignments

Reading assignments will typically be given two times per week and short, written responses to the readings will be due at the beginning of class *the day the reading is due to be discussed* (via Canvas). No late assignments will be accepted, unless prior approval is given. However you will be allowed two unexcused free passes on the written analyses.

Late *lab assignments* will be graded, but the maximum possible grade will be 80%.

Course Policies

Students are *expected* to attend class although attendance is not *required*. Unannounced quizzes may be given. Students are expected to participate in discussions, ask questions, and be otherwise engaged (10% of grade). The use of portable electronic devices is allowed for note taking, but discouraged. No electronic devices, including calculators, may be used during exams or quizzes.

Collaboration/Plagiarism Rules

Students may work together on lab assignments, but may not explicitly copy the work of others. Students must abide by the University's Academic Integrity Code, which defines plagiarism, cheating, fabrication and facilitating misconduct. Academic misconduct cases will be handled in accordance the University's policies. See: www.admin.mtu.edu/usenate/policies/p109-1.htm

University Policies

Student work products (exams, essays, projects, etc.) may be used for purposes of university, program, or course assessment. All work used for assessment purposes will not include any individual student identification.

Michigan Tech has standard policies on academic misconduct and complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990. For more information about reasonable accommodation for or equal access to education or services at Michigan Tech, please call the Dean of Students Office, at (906) 487- 2212 or go to http://www.mtu.edu/ctl/instructional-resources/syllabus/syllabus_policies.html

Abbreviated Course Schedule

Midterm exam – week of Oct 17

Final exam – Dec 12