GEL 17
Earthquakes and Other Earth Hazards
Spring Quarter 2017

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Office Hours:
TF 10:30 – 11:30 am
or by appointment made in advance

Course description: This course focuses on six major hazards: earthquakes, tsunamis, volcanoes, landslides, wildfire, and floods. We'll look at a variety of disasters and catastrophes from around the world and their impact on humans, structures, and the environment. We'll pay special attention to understanding the threat of these hazards to Californians.

Schedule: Class meets: Monday and Wednesday, 2:10 - 3:00 pm 1003 Geidt Hall

Grading:
Midterm 1: Monday, April 24 in class (worth 30% of total grade)
Midterm 2: Wednesday, May 17 in class (worth 30%)
Final exam: Wednesday, June14 at 6:00pm (worth 40%) *Final is comprehensive*
Bring Scantron 2000 to each exam**.** NO EARLY EXAMS OR MAKEUP EXAMS.

Exams will be multiple choice: the exam questions will be designed to make you think, not just spew memorized notes. Study guides and lists of key terms will be posted in the Resources section of the class SmartSite. Final grades are determined on a curve based on total points accumulated on exams.

Textbook: Natural Hazards: Earth's Processes as Hazards, Disasters, and Catastrophes 4th Edition, 2014. *A used copy of the 2nd or 3rd edition is acceptable. (Note: Users of previous editions MUST be careful to read the correct TOPIC for each week, as chapter numbers change between editions.)*

Students are expected to complete assigned readings by the dates listed in this syllabus and to take concise, well organized notes. You will find the textbook a very important supplement to the lecture material in the class. Class exams will draw from both lecture and textbook materials, including some information included in one but not the other source.

I strongly recommend putting in at least 2 hours of study time for every classroom hour. In these 2 hours: 1) read the book and take notes on your reading; 2) answer the study questions; 3) review and summarize your class notes, looking for how concepts are connected; and 4) answer the lecture study questions. This time spent working with the information helps to move it from short term to long-term memory. *Experience shows that most grades on the "A" side of the curve go to students who attend all lectures and complete these 4 hours per week outside of class.*

Class resources (on ***SmartSite.ucdavis.edu*** [not Canvas]**):** Several types of resources and other information will be posted on the class SmartSite website. Prior to the due date for each textbook assignment, several **reading comprehension and study** questions will be posted. These reading study questions *will be removed after the due date* for each reading. In addition, after each class, several **lecture comprehension and study questions** will be posted and will remain on SmartSite. Exams will be partially (but not completely) drawn from both the reading and lecture study questions. In addition, information will be posted to SmartSite about earthquakes, landslides, volcanic eruptions, and floods that happen around the world.

Class Schedule, Topics, and Assignments

W1: 4/3-5	**Class mechanics and Introduction**	**Due___**
M	Class mechanics & Review of earth dynamics	
W	Earthquakes and other hazards facing California	*SmartSite Assignment 1*
W2: 4/10-12	**Earthquakes**	
M	How big and where	Chap. 2
W	Faulting: the cause of earthquakes	
W3: 4/17-19	**Earthquakes**	
M	Effects of earthquakes and seismic mitigation	Chap. 3
W	Tsunami	
W4: 4/24-26	**Coastal Hazards**	
M	EXAM 1	
W	Coastal hazards	Chap. 11
W5: 5/1-3	**Volcanic Hazards**	
M	Volcanoes and volcanic activity on earth	Chap. 5
W	Hazards and mitigation	
W6: 5/8-10	**Landslides**	
M	Slope stability	Chap. 7
W	Hazards and mitigation	
W7: 5/15-17	**Wildfire**	
M	Fire, fire suppression, and wildfire hazard	Chap. 13
W	EXAM 2	
W8: 5/22-24	**Rivers and Flooding**	
M	Types of flood disasters around the world	Chap. 6
W	Rivers: form and process	
W9: 5/31	**Flooding and Flood Policy**	
M	*Memorial Day – No Class*	
W	Flooding and flood-risk management	Hanak et al., 2011
W10: 6/5-7	**Conclusions**	
M	Flood-risk policy in CA and the USA	
W	Summary of natural hazards and review	