Earth Sciences 104 - Geologic Hazards SYLLABUS Fall 2019

Professor: Susan Schwartz, office: E&MS Building A133, phone 459-3133, email syschwar@ucsc.edu, office hours Tuesdays 1:30-3:30
Class: M,W, F 10:40-11:45 E&MS Building D258
TA: Heather Shaddox, office: E&MS C318A, office hours TBD, email: hshaddox@ucsc.edu
Text: Natural Disasters, Any Edition, Patrick L. Abbott- on reserve at Sci. Library
Coursework: 2 hazard reports, in-class/homework exercises, and a final class project
Resources: Instructor, TA, Writing in the Discipline Guide, Canvas homepage
Required Field Trip: Monday October 14, 9-1
Grading: SAF Report: 20%; LP Report 20%; Final Project 15%; Exercises 30%, Online quizzes/activities 15%

Academic Integrity Policy: Although you will be collecting data in groups, all of the written work you submit in this course must be completely your own unless otherwise indicated. You should draw your own graphs and tables and write papers by yourself. You may not copy another student's work or use another student's work as a model. Similarly, you may not directly copy or closely paraphrase passages from books or references, including the internet, even if you cite the work. Everything you write must be said in your own words, and **references must be cited**.

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me privately during my office hours or by appointment, preferably within the first two weeks of the quarter. At this time, I would also like us to discuss ways we can ensure your full participation in the course. I encourage all students who may benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu.

Date		Topic	Reading (9th ed)
9/27	F	Introduction to Geologic Hazards Review Topographic Maps *Ex. 1 Topo Maps in class*	
9/30	M	Faults, Neotectonics and Geomorphology Geomorphology of the San Andreas Fault *Ex. 2 SAF Geomorph in class*	Ch. 3 Earthquake Geology (p. 50-59) Ch. 4 Tectonics and Eqs. p. (95-108) Ch. 5 Earthquakes in US (p. 110-123)
10/2	W	Mass movements-Landslides and Soils *Ex. 3: Landslides- air and topo maps in class*	Ch. 15 Mass Movements
10/4	F	Air Photo, Geologic Interpretation of SAF in Watsonville	

10/7	M	Geologic Reports	
10/9	W	Air Photo, Geologic Interpretation of SAF in Watsonville	
10/11	F	Mass movement- Landslides and Soils Continued *Ex. 4 Slope Stability in class*	
10/14	M	**SAF IN WATSONVILLE FIELD TRIP 9-1**	
10/16	W	Revisit Air Photo, Geologic Interpretation of SAF in Watsonville	
10/18	F	Earthquake parameters *Ex. 5: Earthquakes in class* ***SAF Report Due***	Ch. 3 (rest)
10/21	M	Earthquake strong motions Loma Prieta earthquake-strong motion measurements ***SAF Report Peer Review Due***	
10/23	W	Loma Prieta strong motions and geology	
10/25	F	Loma Prieta strong motion graphs ***SAF Report Revision Due***	
10/28	M	Work on Loma Prieta Report	
10/30	W	Tsunami generation and hazards *Ex. 6: Tsunami in class*	Ch. 8 Tsunami
11/1	F	Work on Loma Prieta Report	
11/4	M	Introduction to Flooding ***Loma Prieta Report Due*** *Ex. 7: Quantitative Flood Analysis*	Ch. 13 Floods
11/6	W	Flood Hazard *Ex. 8: Flood Frequency Analysis*	
11/8	F	Continue Flood Hazard *Ex. 9: Manning Equation*	
11/11	M	**VETERANS DAY HOLIDAY- NO CLASS**	
11/13	W	Flooding Cont. *Ex. 10:HEC-RAS hydraulic modeling*	
11/15	F	Flooding Cont.	

11/18 M	Flooding Continued Introduce/Organize Final Group Projects	
11/20 W	Volcanoes: Diversity and chemistry *Ex. 11: Volcano Hazards*	Ch. 6 Volcanic Eruptions
11/22 F	Volcanoes: Hazard and monitoring *Project Outlines Due*	Ch. 7 Volcano Case Histories
11/25 M	Group Project Work	
11/27 W 11/29 F	**THANKSGIVING HOLIDAY NO CLASS**	
12/2 M	Group Project Coordination	
12/4 W	Group Project Presentations	
12/6 F	Group Project Presentations	