

GEL 32: Volcanoes – Spring quarter 2017
Lectures TR 12:10-1:30 PM, Roessler 55

Contact Information:

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Course Overview:

This course is an introductory course exploring volcanoes and volcanic eruptions on Earth and in the solar system. We will examine the science of how volcanoes work and how they affect the environment, life, and human societies. We will illustrate the principles using local examples of recent volcanism and ancient examples of eruptions, and learn about the challenges and prospects for predicting future eruptions.

Course Policies:

Format:

This course is a lecture course, meeting three hours per week. The *recommended* textbook for the class is Volcanoes, by Robert Decker and Barbara Decker. I will occasionally assign readings from other sources (which will be available on the course website). Exams will be drawn from the material covered in lectures, with the textbook serving as a source of additional information. The textbook is *not required*. Attending the lectures is also the only way to see videos or video clips shown during lectures – these will not be available outside of class. If you miss any lectures for any reason, it is **your** responsibility to find out what you missed, either from your fellow students or by coming to office hours.

Course communications:

Announcements will be made in class, and most of the time will also be posted on the Canvas site for the course. Occasionally I will send out announcements by email – these will be sent to your official UCD email address. Most relevant information about the course can be found on Canvas. Feel free to email me with questions about the course, but there are two important things to keep in mind about this: first, all email correspondence for this course *must go through the Canvas email function* – in an attempt to keep my inbox organized, *I will not answer course-related emails sent directly to my email address*. Second, don't expect an immediate answer – I set aside some time each week to answer class-related email but not every day.

Grading:

Grades are based on two exams during the quarter, a final exam, and quizzes, as follows:

Quizzes:	10%
Exam 1	25%
Exam 2	25%
Final Exam	40%
Extra Credit (optional)	up to 5%

Exams:

Exams 1 and 2 will **not** be cumulative (in Exam 2 you will be tested only on material covered between Exam 1 and Exam 2) but will include everything covered up to and including the class period before each exam. The final exam **is** cumulative, and will include material covered in the entire course. The exams will consist of multiple choice and possibly short-answer questions and **you are responsible** for bringing a UCD 2000 scantron form and a #2 pencil to the exams. You **must** take the exams at the regularly scheduled time. The only exceptions to this policy are *exceptional* circumstances such as a serious illness that prevents you from taking the exam (must be documented by a doctor) or a family emergency. You must convince me that the circumstances are truly exceptional – things like forgetting to set your alarm, forgetting the time of the exam, or travel to attend a family event do not constitute an emergency.

Quizzes:

There will be quizzes each week (except the first week and the weeks of the midterms). These will be given through Canvas, with announcements about how and when to access the quizzes given during lecture. The quizzes cannot be made up. Keep in mind that while each individual quiz is worth only a small fraction of the total points, if you miss a lot of them the zeros you get for those can make a surprising difference in your overall grade.

Extra Credit:

You can earn a maximum of 5% of the course grade through extra credit. The extra credit will be administered by the course reader, and more information will be provided during the first week of classes. Grading for the extra credit will be done at the end of the class.

Accessibility and accommodations:

If you have concerns about accessibility or special accommodations for exams or lectures, first contact the UC Davis Student Disability Center. If they determine that special accommodations are necessary, they will notify me and I will work with you to find a solution. Accommodations must be put in place *before* the exams, and it is your responsibility to start the process early enough to allow enough time for this to happen.

Academic honesty:

Academic misconduct such as cheating or plagiarism will be dealt with in accord with the Code of Academic Conduct (see <http://sja.ucdavis.edu/cac.html>). Academic Senate policy *requires* instructors to report any suspected cases of cheating or plagiarism to Student Judicial Affairs.

Schedule

Note: exact schedule of topics is subject to change. In particular, the readings will be updated with supplementary readings throughout the quarter

GEL 32 Spring 2017					
location: Roessler 55 TR 12:10-1:30 PM					
Wk #	lec #	Day	Date	Topic (subject to change)	Readings
1	1	Tu	4-Apr	Course intro/overview: What is a volcano? what do volcanoes do?	
	2	Th	6-Apr	How do volcanoes work I: Composition and eruptive styles	Ch. 6, 8, 13
2	3	Tu	11-Apr	How do volcanoes work II: What causes volcanism and where is it?	Ch. 6, 8, 13
	4	Th	13-Apr	Volcanoes and early life	Ch. 1, Ch. 3
3	5	Tu	18-Apr	Volcanic hazards I: "red" volcanoes: lava flows, volcanic gases, explosive activity	Ch. 7, Swanson 2008
	6	Th	20-Apr	Volcanic hazards I: "red" volcanoes: lava flows, volcanic gases, explosive activity	McPhee
4		Tu	25-Apr	Midterm exam 1	
	7	Th	27-Apr	Volcanic hazards II: "grey" volcanoes, ash hazards	Ch. 9, 10
5	8	Tu	2-May	Volcanic hazards II: "grey" volcanoes, ash hazards, pyroclastic flows, lahars	Ch. 9, 10
	9	Th	4-May	Volcanic hazards II: "grey" volcanoes, ash hazards, pyroclastic flows, lahars	Ch. 9, 10
6	10	Tu	9-May	Volcanoes and human history/climate	Ch. 17
	11	Th	11-May	Volcanoes and human history/climate	Ch. 17
7		Tu	16-May	Midterm exam 2	
	12	Th	18-May	Volcanoes and public policy	Ch. 4
8	13	Tu	23-May	Volcanoes and public policy - monitoring and communication, benefits of volcanoes	Ch. 5
	14	Th	25-May	Hazards and public policy	Ch. 18, 19
9	15	Tu	30-May	Volcanoes and movies	Ch. 19, 12
	16	Th	1-Jun	Volcanoes and movies	Ch. 19, 12
10	17	Tu	6-Jun	Hazards and public policy	
	18	Th	8-Jun	Supervolcano	
		Wednesday	14-Jun	FINAL EXAM: 3:30 PM	