

EART 3: Geology of National Parks Online

Course Syllabus Summer Quarter 2022

About

Three Earth Science faculty members from UC Santa Cruz, UC Davis, and UC San Diego collaboratively created Geology of National Parks Online. This course will cover introductory geologic concepts as they apply to U.S. National Parks. The “learning management system” for this class is called Canvas. *It's important to understand up front that this online course will require an equal effort as would a similar face-to-face class.*

Through activities, mini-lectures, and readings from the textbook, we'll explore how geologic processes influence the landscapes in our national parks. Along the way you'll learn about the concepts of geologic time, plate tectonics, and how the rocks composing the parks can be used to reconstruct their geologic origins. The intent is to make your next visit to a national park a more rewarding experience because you'll understand what you're seeing on a deeper level.

Instructors

Prof. Susan Schwartz, UC Santa Cruz: syschwar@ucsc.edu

Online Office Hours

Textbook

Exploring Geology, 3rd, 4th, or 5th edition, by Stephen Reynolds, Julia Johnson, Paul Morin, and Chuck Carter (hard copy or ebook). I would suggest getting the ebook or buying a used hardcopy. The UCSC bookstore lists many options for purchasing or renting this resource. You'll be expected to read select sections of the book and the quizzes and exams will have questions from the reading. The textbook is an important component of the course, so don't delay in getting it.

Module Workflow

2 Modules Per Week

Read & Watch (3-4 hours per module)

- Watch each mini-lecture – **take notes** as you would in a face-to-face class
- Read assigned text – **take notes** that relate to the material in the mini-lectures
- You may find it beneficial to alternate reading and watching

Apply (1-3 hours per module)

- Watch the tutorials and walk-through videos as necessary
- Complete the module activity and submit

Connect (1 hour per module)

- Interact with your classmates and instructors through Piazza

Assess

- You must complete a module quiz before moving on to the next module

There are hard deadlines for submitting assignments and taking quizzes and exams that are intended to keep you on pace to finish the course. Download the syllabus you're currently reading and follow it closely as the course progresses.

You will not be able to access a module activity or module quiz after the deadline has passed. Please be sure to maintain a pace and submit each activity and module quiz before each deadline. **We will not accept late work.**

Module Activities

Each module has a hands-on activity designed to expand upon the course material in the mini-lectures and readings. These activities are analogous to a Discussion section in a face-to-face class. You will be provided with video tutorials and walk-throughs to help with the activities and your professor and TA will be available during office hours and via Piazza. No late assignments will be accepted but **your lowest activity score will be dropped from the computation of your class grade. There is also an extra credit activity in Module 3 that is worth 20 points.**

Quizzes

There are three different uses of the term “quiz” in this course: (This is an unavoidable Canvas thing.)

1. Module "quizzes" – these are short and easy quizzes that assess your understanding of the overall module. You will have unlimited attempts to complete each module quiz.
2. "Quiz 1" and "Quiz 2"- these cover material from modules 1-3 (Quiz 1) and 6-8 (Quiz 2) and have 25 questions each. Unlike the end-module quizzes, you will only have one chance to submit these quizzes, so you will need to study ahead of time. You have 30 minutes to complete each quiz.
3. Activity “quizzes” – within each activity, Canvas asks you to “Take the Quiz,” which is Canvas-speak for answering questions associated with the activity.

Exams

Students need to plan to take the midterm and final exam online on the specific dates and times scheduled. The midterm will be an 1 hour timed exam and the final a 2 hour timed exam. The midterm will be taken on your own and the final exam will be administered online through Zoom or by appointment with Proctor U (for a fee of ~\$13.00) on the dates indicated below .

Grading

Total points = 960 (Lowest Activity Grade Worth 40 Points Will Be Dropped)

1 Final (Multiple Choice)	35%	350 pts
1 Midterm (Multiple Choice)	15%	150 pts
10 Module Activities	40%	400 pts
10 Module Quizzes	10%	100 pts

Final letter grades will be curved, based on the distribution of point totals. So your grade will be dictated by how you do relative to your peers, as is the case with all curve-based grading schemes. More detail on this later.

Academic Integrity

- We expect the highest levels of academic integrity in this class. Any suspected cheating will be dealt with following the UCSC Academic Misconduct policy (https://www.ue.ucsc.edu/academic_misconduct) for adjudication.
- Work may be collaboratively done, but the work that you hand in must be your own. A simple way to figure out if the work is your own is to ask whether or not you can reproduce it completely without the aid of other people.

Content Overview

Week	Modules	Geologic Province	National Park
	1 and 2	Colorado Plateau	Grand Canyon

	3 and 4	Colorado Plateau Cascade Range	Zion, Bryce, Arches, Canyonlands Mount Rainier Mount St. Helens Crater Lake Lassen
	5 and 6	Hotspot Volcanism Sierra Nevada	Hawai'i Volcanoes, Yellowstone Yosemite Kings Canyon Sequoia
<i>Midterm Exam*</i>			
	7 and 8	<i>Rocky Mountains</i> <i>Basin and Range</i>	Rocky Mountain Glacier Death Valley Grand Teton
	9 and 10	<i>San Andreas Fault</i> <i>Wrap-Up</i>	Pinnacles Point Reyes American West Synthesis
<i>Final Exam*</i>			

* The midterm and final exams are the only time students will be required to complete class work within a specified window of time.