

Course Syllabus

SIO 16R: Geology of National Parks Online


Spring Quarter 2015

About

Geology of National Parks Online is a new interactive online class collaboratively created by three Earth Science faculty members from UC Santa Cruz, UC Davis, and UC San Diego. This course will cover introductory geologic concepts with special focus on U.S. National Parks.

In this class, we'll explore how geologic processes control the landscapes and features in our parks and along the way learn about the concepts of geologic time, plate tectonics and how the rock record can be used to reconstruct the geological story of the parks.

Office Hours

Jeff Gee: Office hours will be held each Wed., Thurs. from 4-5 p.m. using Adobe Connect: http://ucoe.adobeconnect.com/ucsd_natlparks/  [\(http://ucoe.adobeconnect.com/ucsd_natlparks/\)](http://ucoe.adobeconnect.com/ucsd_natlparks/) Please let us know if you have work or other commitments that will prevent you from attending at either of these times and we will make alternative arrangements.

Rachel Marcuson: Office hours are Friday and Monday from 2-3pm and will be primarily for answering questions related to the exercises.

Instructor Information

Jeff Gee:

[jsgee@ucsd.edu \(mailto:jsgee@ucsd.edu\)](mailto:jsgee@ucsd.edu)

Office: Ritter 300D, located at SIO

Rachel Marcuson:

[rmarcuso@ucsd.edu \(mailto:rmarcuso@ucsd.edu\)](mailto:rmarcuso@ucsd.edu)

Office: Ritter 300B

Textbook

e-Book version of *Exploring Geology, 3rd edition* by Stephen Reynolds, Julia Johnson Paul Morin, and Chuck Carter

Module Workflow

- Read & Watch
 - Read assigned text
 - Complete LearnSmart
 - Watch through the lectures
 - You may find it beneficial to alternate reading and watching
- Learn
 - Work through the tutorials and learning activities
 - Check your understanding of the concepts presented
- Connect
 - Interact with your classmates and instructors through Piazza and Office Hours
- Apply
 - Work through the module application and submit any assignment
- Assess
 - Before moving on to the next module, you must complete the end-of-module quiz

Exams

At UC San Diego, students will have an option to take exams online through ProctorU (for a fee) or in-person.

- Midterm: April 30 at 7pm; Location: TBD
- Final: June 9 at 6pm; Location TBD

Grading

Final (Multiple Choice)	25%
Midterm (Multiple Choice)	15%
Application Exercises	25%
Learning Activities	15%
Reading/LearnSmart	10%
Module Quizzes	10%

Academic Integrity

- We expect the highest levels of academic integrity in this class. Any cheating of any kind will be referred to the university for disciplinary action.
- 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 in entirety without the aid of any other people or your problem sets.

Content Overview

	Geologic Province	National Park
Module 1	Colorado Plateau	Grand Canyon
Module 2		
Module 3		Zion Bryce Arches Canyonlands
Module 4	Cascade Range	Mount Rainier Mount St. Helens Crater Lake Lassen Volcanic Complex
Module 5	Hotspot Volcanism	Hawai'i Volcanoes Yellowstone
Midterm Exam*		
Module 6	Sierra Nevada	Yosemite Kings Canyon Sequoia
Module 7	Rocky Mountains	Rocky Mountain Glacier
Module 8	Basin and Range	Death Valley Grand Teton
Module 9	San Andreas Fault	Pinnacles Point Reyes
Module 10	North American West Synthesis	
Final Exam*		

* The midterm and final exams are the only time students will be required to meet in-person at UC Davis. At UC Santa Cruz and UC San Diego, students will have an option to take exams online through ProctorU (for a fee) or in-person.

Date

Details

Date	Details
Mon Apr 6, 2015	Introduction to Topographic Maps (https://cole2.uconline.edu/courses/356325/assignments/3268572) due by 11:59pm
	Module 1 Application: Topographic Maps and the Grand Canyon (https://cole2.uconline.edu/courses/356325/assignments/3268568) due by 11:59pm
	Module 1 Quiz (https://cole2.uconline.edu/courses/356325/assignments/3268564) due by 11:59pm
Mon Apr 13, 2015	Introduction to Relative Dating (https://cole2.uconline.edu/courses/356325/assignments/3268559) due by 11:59pm
	Module 2 Application: Relative Time (https://cole2.uconline.edu/courses/356325/assignments/3268562) due by 11:59pm
	Module 2 Quiz (https://cole2.uconline.edu/courses/356325/assignments/3268575) due by 11:59pm
Mon Apr 20, 2015	Module 3 Application: The Grand Staircase (https://cole2.uconline.edu/courses/356325/assignments/3268561) due by 11:59pm
	Module 3 Quiz (https://cole2.uconline.edu/courses/356325/assignments/3268567) due by 11:59pm
	Zion National Park (https://cole2.uconline.edu/courses/356325/assignments/3268553) due by 11:59pm
Mon Apr 27, 2015	Controlling Volcanic Eruptions (https://cole2.uconline.edu/courses/356325/assignments/3268569) due by 11:59pm
	Module 4 Application: Subduction Zone Factory (https://cole2.uconline.edu/courses/356325/assignments/3268577) due by 11:59pm

Date	Details
	<p>Module 4 Quiz (https://cole2.uonline.edu/courses/356325/assignments/3268570) due by 11:59pm</p>
	<p>USGS Quadrangles (https://cole2.uonline.edu/courses/356325/assignments/3268566) due by 11:59pm</p>
Wed Apr 29, 2015	<p>Midterm Preparation (https://cole2.uonline.edu/courses/356325/assignments/3320722) due by 11:59pm</p>
Mon May 4, 2015	<p>Mantle Plume and Hotspot Concept Sketch (https://cole2.uonline.edu/courses/356325/assignments/3268573) due by 11:59pm</p> <p>Module 5 Application: Determining Plate Rates from Hotspot Tracks (https://cole2.uonline.edu/courses/356325/assignments/3268549) due by 11:59pm</p> <p>Module 5 Quiz (https://cole2.uonline.edu/courses/356325/assignments/3268560) due by 11:59pm</p>
Mon May 11, 2015	<p>Module 6 Application: Geologic Features of Yosemite National Park (https://cole2.uonline.edu/courses/356325/assignments/3268563) due by 11:59pm</p> <p>Module 6 Quiz (https://cole2.uonline.edu/courses/356325/assignments/3268554) due by 11:59pm</p>
Mon May 18, 2015	<p>Module 7 Application: Measuring Glacial Retreat at Grinnell Glacier (https://cole2.uonline.edu/courses/356325/assignments/3268571) due by 11:59pm</p> <p>Module 7 Quiz (https://cole2.uonline.edu/courses/356325/assignments/3268558) due by 11:59pm</p> <p>Structural Geology and Metamorphism (https://cole2.uonline.edu/courses/356325/assignments/3268555) due by 11:59pm</p>
Mon May 25, 2015	<p>Module 8 Application: Basin and Range Concept Sketch (https://cole2.uonline.edu/courses/356325/assignments/3268551) due by 11:59pm</p>

Date	Details
	Module 8 Quiz (https://cole2.uonline.edu/courses/356325/assignments/3268576) due by 11:59pm
Mon Jun 1, 2015	Locating Earthquakes (https://cole2.uonline.edu/courses/356325/assignments/3268552) due by 11:59pm
	Module 9 Application: Shoreline Processes at Pt. Reyes (https://cole2.uonline.edu/courses/356325/assignments/3268578) due by 11:59pm
	Module 9 Quiz (https://cole2.uonline.edu/courses/356325/assignments/3277673) due by 11:59pm
Mon Jun 8, 2015	Module 10 Application: Bringing it all together (https://cole2.uonline.edu/courses/356325/assignments/3268557) due by 11:59pm
Fri Mar 1, 2019	Chapter 2. Investigating Geologic Questions (https://cole2.uonline.edu/courses/356325/assignments/3297913) due by 11:59pm
	Chapter 6. Volcanoes and Volcanic Hazards (https://cole2.uonline.edu/courses/356325/assignments/3297915) due by 11:59pm
	Chapter 7. Sedimentary Environments and Rocks (https://cole2.uonline.edu/courses/356325/assignments/3294816) due by 11:59pm
Mon Jul 1, 2019	Chapter 9. Geologic Time (https://cole2.uonline.edu/courses/356325/assignments/3297914) due by 11:59pm Course Orientation Quiz (https://cole2.uonline.edu/courses/356325/assignments/3268556) due by 11:59pm