

COURSE OVERVIEW AND SYLLABUS

GEL 1: THE EARTH, WINTER 2020

WHO, WHAT, WHEN AND WHERE?

PROFESSOR: Dylan Spaulding (dkspaulding@ucdavis.edu)

Dept. of Earth & Planetary Sciences

Office hours: Mon 1:00 - 2:00pm & Fri 2:00 - 3:00pm in EPS 2242 (or email for an alternate time).

LECTURE: Geidt 1001, Monday, Wednesday and Friday 12:10 – 1:00 pm

DISCUSSION: See below for the complete schedule, locations and TA contact info.

GOAL OF THE COURSE:

To get you to view the world like a geologist and introduce you to the concepts underpinning the origin and evolution of our planet. An introduction to Earth's history will provide context for environmental issues, energy problems, and ongoing global change that we'll all be dealing with for the foreseeable future. You should come to appreciate the importance of 'scale', particularly in thinking about 'Deep Time' and how to 'think historically' about Earth processes. This will hopefully give you a new appreciation for humanity's relationship to our environment. The societal relevance of geology will become evident as we discuss natural disasters (earthquakes, volcanoes, tsunamis, floods), economic resources (water, fossil fuels, minerals) and our influence on the Earth (climate change).

GEL 1 qualifies for GE credit in Science & Engineering topical breadth as well as GE credit in Scientific Literacy.

CLASS STRUCTURE

Come to class!! My goal is for this class to be fun, interesting and as participatory as possible. It will ultimately be faster, more efficient and educational for you to come listen to one hour of lecture rather than skipping it and then counting on teaching yourself the material from the book. This course will be dynamic, and *not everything you need will necessarily be in the notes*. Come to class. Ask questions. Have fun. In return, I promise to make it worth your while.

This is a big class, but I strongly encourage you to speak up in class - any question is legitimate, and I promise that if you ask it, I'll take the time to answer it.

TEXTBOOK, NOTES AND ASSIGNED READING

We will be using *Physical Geology Today* (2016, 1st ed.), by Nance & Murphy.

You can find this book in the [campus bookstore](#) or on [Amazon](#). It is also available as an e-Book with "try-before-you-buy" access through the course Canvas site. To access the E-Book, click on the 'Bookshelf' link in Canvas. *If* you opt-in to the e-Book you have a limited amount of time to opt back out before the access charge is billed to your campus account, so be careful. Please contact inclusiveaccess@ucdavis.com with questions about this purchasing option. Ultimately,

you may choose the format that works best for you. While it's not the cheapest, many students prefer the hard-copy for studying. I've also placed a copy on reserve at Shields library that you can check out for 2 hours at a time if you're in a pinch.

Don't panic! We will NOT be going through the whole book! I will give you specific sections to read and it's important that you read strategically! Although the lectures and notes will complement the material in the book, you can't just substitute one for the other. You will need to synthesize what's in all three. This textbook is profusely illustrated - just viewing the graphics in the book in coordination with the lecture will bring the topic to life and help you better understand the material.

Reading assignments by week:

<i>Week of:</i>	<i>Lecture Topic:</i>	<i>Textbook</i>
Jan 6 - 10	Introduction; Foundations; Building the Earth and Exoplanets	Sections 1.6-1.9
Jan 13 - 17	Building the Earth (cont.); Plate Tectonics: Part I - Making and Breaking Continents	2.1 - 2.5
Jan 20 - 24	Plate Tectonics: Part II - The Dynamic Earth	9.3 - 9.8
Jan 27 - 31	Minerals and Rocks: Atomic to Planetary Scale	3.1, 3.2, 3.6 - 3.8
Feb 3 - 7	Geology as a career, Igneous Processes	4.1 - 4.3, 9.2
Feb 7	<i>Midterm (50 minutes, in class, bring Scantron 2000)</i>	
Feb 10 - 14	Volcanism - Igneous Processes II	4.6 - 4.7
Feb 17 - 21	Earthquakes & Earth's Interior, Tsunamis	11.1-11.5
Feb. 24 - 28	Telling Time: Sedimentation, Age Dating	6.1-6, 8.1, 8.3, 8.5-8.9
Mar 2 - 6	End of the Oil Age?	19.1-19.3
Mar. 9 - 13	Global Change and the Anthropocene	15.1, 15.4, 20.1-20.5, 20.8
March 18	<i>Final Exam - 1:00-4:00 PM (cumulative, bring Scantron 2000)</i>	

Please don't try to do all the reading at once! It's much better if you keep up week-by-week and digest it slowly as we go. Trying to read it all at once will be both ineffective and unenjoyable for you... Just sayin'...

PDF outlines of notes for each unit in the course will be posted in the 'Files' link on the Canvas site close to the actual time of the topic. They are relatively comprehensive, but **they will help you far more if you annotate them with your own notes, sketches and comments**. Use them to study for exams but add to them from the lectures and the reading as you see fit.

ELECTRONICS

Although we live in a world of electronic convenience, I want to ask you to consider limiting your use of laptops, tablets and cell phones strictly to academic use. If it's not course-related (e.g. social media, email), chances are you are only distracting yourself and your neighbors. Be considerate and be present! Attentiveness will pay off.

Occasionally, I may use QR codes for polling in class. It will be handy if you have your phone equipped with a scanning app. Many are available for free for iPhone and Android and it

shouldn't matter which you choose. I will offer extra credit to those who participate regularly in the polls! All electronics are strictly forbidden in exams.

DISCUSSION SECTIONS

The lecture and discussion topics are *purposefully* decoupled. Discussion is not meant to simply review the lecture but to *add* to it in practical and active ways that are hard to achieve in the large lecture hall. Discussion and lecture will complement each other and help give you a broader understanding of the breadth of geology.

Materials that you will need for discussion can be found on Canvas under 'Files – Discussion Activities'. The TAs will go over discussion topics & assignments with you each week and remind you of upcoming deadlines and I will send out regular announcements to give you a heads up when something new is posted or if anything changes.

Please go to the section that you signed up for! The discussion is worth 25% of the overall class grade, so it is important to attend and participate in the activities. Obviously, we will try to work around legitimate absences or special circumstances, but you need to work those out *in advance* with me and with your TA.

The discussion sections are intended to be straightforward and relevant. Learn your TA's name and get to know them personally – they're all willing to help if you ask (and so am I)!

The discussion schedule is listed below. To access this schedule online as well as to find your TA's office hour schedule and locations, please visit the [link on the main Canvas homepage](#).

Teaching assistants and discussion sections:

Section	Time	Location	Teaching Assistant	Email
A01	Mon., 11:00 – 11:50am	EPS 1316	Meghan Zulian	mzulian@ucdavis.edu
A02	Thurs., 10:00 – 10:50 am	EPS 1348	Elaine Young	ekyoung@ucdavis.edu
A03	Thurs., 12:10 – 1:00 pm	EPS 1316	Elaine Young	ekyoung@ucdavis.edu
A04	Tues., 12:10 – 1:00 pm	EPS 1316	Gigia Hollyday	gohollyday@ucdavis.edu
A05	Wed., 11:00 – 11:50 am	EPS 1316	Gigia Hollyday	gohollyday@ucdavis.edu
A06	Mon., 10:00 – 10:50 am	EPS 1316	Veronica Prush	vbprush@ucdavis.edu
A07	Wed., 10:00 – 10:50 am	EPS 1348	Meghan Zulian	mzulian@ucdavis.edu
A08	Fri., 11:00 – 11:50 am	EPS 1316	Veronica Prush	vbprush@ucdavis.edu
A09	Tues., 10:00 – 10:50 am	EPS 1348	Haoyuan Li	hylli@ucdavis.edu

EXAMS AND GRADING

HOMEWORK/ASSIGNMENTS (Mostly online exercises and including two, short ~1-2 page written assignments) = 40%

DISCUSSION SECTIONS (participation ~10%, discussion exercises ~15%) = 25%

MIDTERM (Friday, February 7th, in class, bring a scantron) = 15%

FINAL (Cumulative, Wednesday, March 18th, 1:00 - 3:00 pm, bring a scantron) = 20%

Exams will be multiple choice. Be forewarned - the questions will be based directly on the lectures, notes, and reading but will be designed to make you think- not just regurgitate specific phrases or facts. NO EARLY EXAMS OR MAKEUP EXAMS except under *truly* exceptional circumstances, which you will need to justify.

Late work will generally not be accepted unless you've made arrangements ahead of time with me and/or your TA for justified reasons.

HONESTY AND ACADEMIC CONDUCT

All students are expected to abide by the UCD code of academic conduct. You can find a copy in a folder called 'Academic Conduct' in the [Files](#) link on Canvas. You will also find a document there that reviews what *is* and *isn't* plagiarism. Cases of plagiarism or cheating *must* (and will) be reported to Student Judicial Affairs. You don't want that and neither do I, so please act responsibly. Remember that you are here at Davis to learn and plagiarism and cheating are primarily a disservice to yourself.

GENERAL HUMAN CONDUCT

It is my intent that students from all diverse backgrounds and perspectives be well-served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that the students bring to this class be viewed as a resource, strength and benefit. I will always strive to present materials and activities that are respectful of diversity: gender identity, sexuality, disability, age, socioeconomic status, ethnicity, race, nationality, religion, and culture. We are here to learn about the Earth which we all share and in doing so, I hope all students will help me in contributing to a positive learning environment that benefits everyone equally.

Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally, or for other students or student groups.

STUDENT RESOURCES

Everyone has a hard time sometimes. Don't be afraid to take advantage of campus resources if you are facing difficulties that extend beyond the classroom. You can ask me for additional help or check out the links below if you feel they might be helpful.

Academic Advising Resources (Questions about your major, academic requirements etc)
<https://academicadvising.ucdavis.edu/>

Mental Health Counseling
<https://shcs.ucdavis.edu/counseling-services>

Wellness on Campus
<https://shcs.ucdavis.edu/wellness>

Aggie Compass: Resources for mental health, food, housing or financial insecurity
<https://aggiecompass.ucdavis.edu/>

LGBTQIA Resources
<https://lgbtqia.ucdavis.edu/>

None of the above? Try this Resources FAQ for academic success and personal well-being
<https://ebeler.faculty.ucdavis.edu/resources/faq-student-resources/>