GEOL 1: Physical Geology

Mt. San Antonio College

Course meetings: Mondays and Wednesdays, 1:15-4:25 PM

Who I am and how to get in touch with me:

- Becca Walker; please call me Becca
- E-mail: rwalker@mtsac.edu
- Phone: 909.594.5611 x6339 *[Warning: phone sometimes eats voicemails.]*
- Office: building 60, room 1102 (1st floor by vending machines)
- Office hours for fall 2016:
  - Mondays, 12:30-1:00 PM
  - Tuesdays, 2:45-3:45 PM [may change, stay tuned]
  - Wednesdays, 9:00-10:45 AM; 12:15-1:00 PM

  } no appointment needed; just stop by
  - additional times by appointment (translation: if you are unable to attend scheduled office hours, please e-mail me *with a reasonable amount of notice* and let me know when you would like to come in)

Course description: Simply put, GEOL 1 is an introduction to how the Earth works, how fantastic and important geology is, and how to think like a scientist. You will learn about what the Earth is made of, how the Earth changes, the implications of these changes for humans, and a little bit about what it means to "do science". Rather than me spending the semester trying to convince you how important geology is, I want to help you think about the relevance of geology to your life in Southern California. You are taking an integrated lecture/lab course this fall—good choice. Meeting for 6 hours per week will allow you to gain hands-on experience, work independently and in groups to make systematic, detailed observations, and think critically to solve scientific problems.

Full disclosure: important.

#1. This is college. It is your choice to be here. And it's a privilege. To be successful and earn a degree that means something, you need to **work consistently and relentlessly during and outside of class**. I respect whatever your goals are for this class and for your education, but ultimately, your performance is your responsibility. If you are committed to your education, then show up (I mean that in the literal and figurative senses) and make it happen. If your heart's not in it, don't waste your time and energy…or your colleagues' time and energy….or my time and energy.

#2. The format of this class may be different than what you are used to. During class, you are supposed to be talking to other people **and contributing**. A quiet lab is a bad lab. If you have questions, let me know. You may have to wait a few minutes for me, so please be patient. It is my job to help you, not to give you the answers, so don't be surprised if I respond to your question with another question. I'm not doing this to annoy you—I'm trying to teach you how to think on your own. **Be prepared to work hard, use your brain, be positive, and always try your best.**

Textbook:

Reynolds, S.J., Johnson, J.K., Kelly, M., Morin. P.J., and Carter, C.M., 2010, Exploring Geology (2nd Edition): McGraw-Hill, 577 p. ISBN 978-0-07-727040-7.

Note: You need to have access to the book and read it. Period. If you have an older edition of the book, that's fine.

Work outside of class:
Plan on an average of 10 hours of focused work per week outside of class, including doing assignments, reading, studying, attending office hours, etc. 10 hours is an average. Some weeks, you will have fewer than 10 hours of work outside of class. Other weeks, you will have more than 10 hours of work outside of class.

Course objectives (what you should be able to do after taking this course):

- ***Think critically and solve problems without being told the answer.***
- Describe basic Earth processes to someone without a science background and explain how Earth processes influence the formation and distribution of minerals, rocks, earthquakes, volcanoes, oceans, continents, and landscapes.
- Understand how Southern California's tectonic setting and geographic location impact its climate, economy, natural hazards, and the lives of its residents.
- Investigate geologic phenomena on a variety of spatial (size) and temporal (time) scales.
- Interpret data including graphs, maps, photos, and rock/mineral samples.
- Become more educated about how your actions impact the environment.
- Be aware of the amount of work and performance level necessary at a four-year school.
- ***Understand the concept of accountability as it applies to success in higher education.***
- Accept that you are capable of doing well in and enjoying a science class, even if you are "scared of science" or believe that you are "not a science person" (whatever that means).

SUPER, SUPER IMPORTANT! READ CAREFULLY!

Course policies:

The course policies and personal conduct standards for this class are very simple, will not change, and apply to every person in the course. It is **<u>your</u>** responsibility to understand and abide by the policies. If you choose not to, you need to take responsibility for your choice.

1.) Can work be made up?
NO. EXAMS, LABS, HOMEWORK, FIELD TRIPS, AND IN-CLASS WORK CANNOT BE MADE UP UNDER ANY CIRCUMSTANCES. Please do not ask me to make up work, regardless of the reason—it's not going to happen. There is no wiggle room on this.

2.) What is the penalty for late work?
For every minute that an assignment is late, 10% (ten percent) will be deducted from your grade on the assignment. End of story. There is no wiggle room on this. Please don't ask me to accept late work from you for full credit, regardless of the reason—it's not going to happen. An excellent way to avoid handing in work late is to submit it before the due date. I will always accept work early.

3.) Can I e-mail you my work?
No. Assignments will be accepted in hard copy only. This eliminates having to deal with the host of mystical computer issues that tend to arise when assignments are due.

4.) Can I have someone deliver my work for me?
As long as the work is turned in on time or early, that's fine. However, if the person is late, loses the assignment, gives the assignment to the wrong instructor, etc., it is not my responsibility.

5.) Do I have to be on time for class? Do I have to stay for the whole time?
Being on time for class is important, so please plan accordingly to ensure an on-time arrival. Lack of parking is ***not*** a valid excuse for being late. Parking in Lot R and walking for 10 minutes to building 60 will not kill you. Since graded work will be completed at the beginning of each class, habitual tardiness will be detrimental to your grade. I understand that occasionally, life happens and you may be late. If this is the case, please do not disturb the class when you enter. Class lasts from 1:15-4:25, so plan on staying for the entire time. Work, meetings, practices, appointments, etc. do not take precedence over class.

6.) Do I have to come to class?
There is no formal attendance policy. However, if you miss a class meeting, you will have no idea what is going on when you return. If you aren't able to attend 100%--or close to 100%--of the class meetings, this is not the appropriate semester for you to be taking the course. If you have to miss a class meeting, it is your responsibility to get caught up on what you missed. It would be a good idea to get the notes from someone in class and ask me for copies of papers that were distributed. If you miss a lab, you need to finish it outside of class and submit it by the due date. I'm happy to help you catch up if you take the initiative to do so in a timely fashion. **However, if you missed something on the day that you were absent (which you will, since we complete work every class meeting), remember that late work loses 10% for every minute that it is late, and no makeups are offered.**

7.) I am registered with DSP&S. What do I need to do?
If you require accommodations (examples: extended time, note-taker), please contact DSP&S (Disabled Student Programs and Services) as soon as possible to have them send me the necessary paperwork.

8.) May I take photos of the notes that are written on the board instead of writing them down?
No. Photographing notes is significantly less beneficial for your learning than physically writing the notes down. Furthermore, photographing hand samples, maps, etc. is worthless, so please don't do that, either.

9.) May I record class meetings?
If your DSP&S accommodations include recording lectures, yes, with the following stipulations: you need to verbally let me know about that BEFORE you do any recording; I reserve the right to halt recording at any time during class; recordings are for your own use only. If you do not have DSP&S accommodations to record lectures, no.

Personal Conduct

1.) Substance policy

Possession, consumption, or being under the influence of mind-altering substances (alcohol and drugs) during class (including in-class meetings, field trips, and extra credit outings) is a violation of college policy. Any individual suspected of violating the college substance policy will be immediately removed from class. Law enforcement will be involved. Disciplinary action from the college will be taken.

2.) Academic honesty: ***READ VERY CAREFULLY***

Being a productive member of society means embodying honesty and integrity. Cheating is a major offense that I take very seriously. I have a "no questions asked" policy, which means that the following will happen, no questions asked, if there is any instance OR suspected instance of academic dishonesty.

Step 1: You will receive a zero on the assignment.

Step 2: The academic dishonesty will be reported to Student Services. There will be a hearing and additional consequences handed down by Student Services.

I am not kidding!! Here are some examples of academically honest vs. dishonest behavior:

Academically honest	Academically dishonest
Working with other people to complete assignments.	Copying answers from someone else's paper because you didn't finish your assignment, you didn't understand the question, etc.; letting other people copy your answers.
Talking about answers to assignments with other people.	Listening to other people's conversations about labs and copying what they say without doing any work yourself.
Working independently during exams.	Using cheat sheets, copying answers from someone else's exam, or letting someone copy your answers.
Using information from outside sources (books, magazines, websites) and citing where the information came from.	Using information from outside sources without citing the source of the information. (Examples: cutting and pasting from the internet. Handwriting information from the internet, books, magazines, etc. Buying a paper. Having someone else do an assignment for you.)
Being honest, taking responsibility for your actions, and dealing with the consequences of your actions.	Lying to try to avoid taking responsibility for your actions.

If you have any other questions about what constitutes academic dishonesty, plagiarism, cheating, copying, etc., ask. **"I DIDN'T REALIZE _____ WAS CHEATING" IS <u>NOT</u> A VALID EXCUSE. REGARDLESS OF WHETHER OR NOT YOU THOUGHT _____ WAS ACADEMICALLY DISHONEST, THERE WILL BE CONSEQUENCES FOR ACADEMIC DISHONESTY. IF YOU'RE NOT SURE, PLEASE ASK!**

3.) Electronic gadget policy

<u>Cell phones:</u> I understand that sometimes, people have family situations that may require them to keep their cell phone turned on. For the time being, I am going to allow you to keep your cell phone on during class if you need to for a legitimate reason, provided that **PHONES ARE PUT AWAY (NOT VISIBLE), SET SO THAT THEY WILL NOT MAKE NOISE, AND ARE NOT USED FOR WEB SURFING OR TEXTING DURING CLASS, EVER.** If you need to use your phone, simply leave the classroom. **If this courteous cell phone policy gets abused, I will revise the policy to include NO cell phones.**

Laptops/tablets/Ipads:
If you want to use a laptop or similar gadget for NOTETAKING ONLY, I don't recommend it, but do what you want. You may NOT go online during class. **If this courteous computer policy gets abused, I will revise the policy to include NO computers.**

Music: Please don't inflict your music choices on other people. If you want to listen to music before class or during break, great, but please either use headphones or leave the classroom.

4.) The classroom community and appropriate behavior
You are choosing to be here. As such, the expectation is that you will be a positive and active member of the learning community. Here are some "suggestions" (i.e., requirements) about appropriate behavior for the learning community:

Behavior appropriate for learning community:	Inappropriate learning community behavior:
--Being alert and engaged during class.	--Sleeping or putting your head down.
--Feeling comfortable asking questions.	--Disrespectful behavior toward people or the environment (including littering.)
--Working hard and having fun.	--Whining and/or complaining.
--Having a positive attitude.	--Using electronic gadgets during class.

5.) Asking questions
If you have a question about anything during or outside of class, please ask. Questions are always welcomed and respected. There is no such thing as a stupid question. If I don't know the answer, I will do my best to find out for you.

6.) Collaborative work
I encourage you to work together when appropriate. This may include forming study groups, working on homework together, or collaborating during class. However, make sure that the work that you turn in is your own and reflects your understanding of the material (i.e., no copying!) If I observe that someone is not contributing to his/her group and is just copying other people's work, that person will be removed from the group.

7.) Lab materials, safety, and cleanup
- *Safety:* If you get injured in lab (even a minor injury), let me know immediately.
- *Acid protocol:* We will use dilute hydrochloric acid (HCl) this semester. It won't burn your skin in small quantities, but it will put holes in your clothing. If you use HCl on a sample, wipe it off with a paper towel when you're done.
- *Cleanup:* Before you leave, make sure that your work area is as clean and organized as you found it. Leave samples in the correct order and in the proper tray/drawer.

Course Grades: This is a 4-unit course. Each person has the potential to earn 1000 points. The final grade will be calculated based on the total number of points that he/she earns:

A (mastery; outstanding work):	895-1000 points (89.5%-100%)
B (above average; very good work):	795-894 points (79.5-89.4%)
C (average; satisfactory work):	695-794 points (69.5-79.4%)
D (not passing; unsatisfactory work):	595-694 points (59.5-69.4%)
F (failure; unacceptable work):	below 595 points (below 59.5%)

There is no curve. The grade that you earn is the grade that you receive.

Grade breakdown:

Lab work: 20% of final grade	200 points
Exams: 35% of final grade	350 points
Exams #1, #2, and #3: 100 points each	
Finals week (cumulative): 150 points	
Field trip materials: 15% of final grade	150 points
In-class work and problem sets: 22% of final grade	220 points
Project: 8% of final grade	80 points
Total:	1000 points

Lab work: You will be completing numerous lab exercises during the semester. Your lowest lab grade will be dropped. **Late labs are subject to 10% off the grade for every minute they are late.**

Exams: There are three exams during the regular semester, each of which will include lecture and lab material. Your lowest grade of exams 1, 2, and 3 will be dropped. Exams last from 1:15-3:15. You will also have cumulative exams for both lecture and lab during finals week. Exams are closed book and closed notes. You may not wear headphones or earpieces during exams. **Exams cannot be taken early, late, or in an alternate location (other than DSP&S, if applicable) for ANY reason.**

Field trip materials: It is department policy that you must attend the field trip to pass the course, no exceptions. This means that even if you earn an A+ in the class but do not go on the field trip in its entirety, you receive an F in the class. There will be a fun overnight trip to Barstow the week of November 7. Clear your schedule now! **The field trip cannot be done early, late, or in an alternate location for any reason.**

In-class work and problem sets: You will be doing a significant amount of individual and group work during class. Some of the in-class work will be formally graded, whereas other in-class work will be "graded" based on attendance (i.e., if you were in class and participated, you receive full credit. If you didn't participate, you receive a zero.) In addition, there will be numerous outside-of-class problem sets designed to keep you thinking about geology constantly. **In-class work cannot be done early or late for any reason for credit. Problem sets are subject to 10% off the grade for every minute they are late.**

Project: You will receive more information about the project in a separate document.

Optional extra credit:

There will be 40-ish points (equivalent to 4% added to final grade) of extra credit offered:

1.) Bonus questions on celebrations of knowledge	up to 20 points
2.) Environmental awareness activity (see separate document)	20 points

Grade updates will be provided periodically (~once a month), but it is your responsibility to keep track of your grade.

Some additional notes on grades

Getting graded work back

Grading your work takes me a long time because I grade your work carefully. I return your graded work as promptly as possible. For celebrations of knowledge, this is typically one week from the day that you took it. Turnaround time is typically longer than a week for field trip materials and labs. **PLEASE DO NOT ASK ME IF/WHEN YOU ARE GETTING YOUR GRADED WORK BACK.** You will get your work back as soon as I am finished grading it, but please be patient.

Grade-related questions

If you have grade-related questions, please visit me during my office hours or make an appointment outside of office hours to discuss your grade. It is **NOT** appropriate to try to discuss grades during class or during break.

Appealing a grade

If you believe that there has been an error made in grading one of your assignments, the following grade appeal procedure must be followed:

1) You must visit me in person within one (1) week of receiving the assignment back.

2) When you visit me, you must bring a written statement describing why you are seeking a grade adjustment. Your statement should be as specific as possible (for example, which question numbers you believe were graded incorrectly.)

If you do not follow this grade appeal procedure, I am unable to accommodate grade adjustments.

What you can expect from me

- I will put my best effort into my job.
- I will treat you fairly (i.e., the same as everyone else in class) and with respect.
- I will be honest with you.
- I will notify you with as much notice as possible if there is a schedule change.
- I will return graded work as promptly as possible. Grading your work takes me a long time because I grade your work carefully. For celebrations of knowledge, this is typically one week from the day that you took it. Turnaround time is typically longer than a week for field trip materials and labs. **PLEASE DO NOT ASK ME IF/WHEN YOU ARE GETTING YOUR GRADED WORK BACK.** You will get your work back as soon as I am finished grading it, but please be patient.

I look forward to working with you this fall!

Tentative schedule in tabular form

Week	Date	Topic(s)	Recommended reading for today
1	Aug 29	The nuts and bolts of physical geology: introductions, syllabus, and basics of Earth	112-113; 558; 17; 44-45; 252-257
	Aug 31	Minerals: physical properties and identification	74-91; 93
2	Sept 5	*No class: campus closed for Labor Day Holiday*	
	Sept 7	Minerals: chemical composition Composition and structure of the Earth	94-97; 92 8-9; 354-355; 42-43
3	Sept 12	The continental drift hypothesis Evidence for plate tectonics	42-43; 318-319 274-275; 270-271
	Sept 14	Plate tectonics	52-67; 272-273; 278-279
4	Sept 19	Plate tectonics	52-67; 272-273; 278-279
	Sept 21	**Celebration of knowledge #1** Igneous processes: why rocks melt	106-111; 114-131
5	Sept 26	Igneous rocks: intrusive igneous activity	106-111; 114-131
	Sept 28	*No class meeting. But you'll have plenty to do…..*	
6	Oct 3	Igneous processes: volcanoes	136-163
	Oct 5	Physical and chemical weathering processes Sedimentary processes: why sediment forms	174-175; 438-449 170-173; 176-197
7	Oct 10	Sedimentary processes: paleoenvironments and sedimentary structures	170-173; 176-197
	Oct 12	Metamorphic rocks: how rocks change	206-207; 214-227
8	Oct 17	Metamorphic rocks: protoliths	206-207; 214-227
	Oct 19	Catch up/regroup	
9	Oct 24	**Celebration of knowledge #2** Determining rock ages	12-15; 100-101 236-249; 28-29; 538-539
	Oct 26	Geologic contacts	
10	Oct 31	Topographic maps	
	Nov 2	How rocks bend and break: folding, faulting, and mountainbuilding	368-369; 380-383 26-27; 30-34; 228-229
	Nov 7	Geologic maps and cross-sections	
	Nov 9	The Barstow Formation Desert processes	
	Nov 10-11	**Required field trip to Mojave/Rainbow Basin (Thursday morning through Friday evening**	
12	Nov 14	*No class meeting (I know, it's sad…..but you'll get over it)*	
	Nov 16	**Celebration of knowledge #3** Water resources and groundwater contamination	reading to be announced
13	Nov 21	Slope failure and society Reading the landscape	reading to be announced
	Nov 23	Reading the landscape	Reading to be announced
14	Nov 28	Anatomy of a slow-slip event	reading to be announced
	Nov 30	Anatomy of a slow-slip event	reading to be announced
15	Dec 5	Hazard mapping	reading to be announced
	Dec 7	Rocks, minerals, and money	
16	Dec 12	**Final celebration of knowledge, 1:30-4:00 PM**	
	Dec 14	**Final celebration of knowledge, 1:30-4:00 PM**	

Note: This schedule is subject to change (and probably will). Events in bold will NOT change, so please mark these dates on your calendar.

Tentative schedule in calendar form

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	August 29	30	31	September 1	2	3
4	5 *campus closed*	6	7	8	9 *Drop with full refund*	10
11	12 *Drop without a "W"*	13	14	15	16	17
18	19	20	21 **celebration of knowledge #1**	22	23	24
25	26	27	28 *no class meeting*	29	30	October 1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24 **celebration of knowledge #2**	25	26	27	28	29
30	31	Nov 1	2	3	4 *Drop with a "W"*	5
6	7	8	9	10 **FIELD TRIP**	11 **FIELD TRIP**	12
13	14 *no class meeting*	15	16 **celebration of knowledge #3**	17	18	19
20	21	22	23	24 *campus closed*	25	26
27	28	29	30	December 1	2	3
4	5	6	7	8	9	10
11	12 **FINAL KNOWLEDGE CELEBRATION 1:30-4:00 PM**	13	14 **FINAL KNOWLEDGE CELEBRATION 1:30-4:00 PM**	15	16	

Student Learning Outcomes (SLOs) include general skills, knowledge, or applications which students are expected demonstrate after completing a course or program of study. The discipline faculty responsible for a course or program develop these outcomes, as well as measure or assess the students to determine if the outcomes are being met. The goal of assessing SLOs is to help improve our courses, curriculum, student success, and/or instruction.
Course-level SLOs do not need to be comprehensive, they can focus on a particular aspect of a course, and the measurements of these assessments are not necessarily part of the students' grades in the courses. SLOs do not necessarily represent all of the material and objectives to be learned in a course.

To find your course or program-level SLO, please proceed to slo.mtsac.edu.