

Environmental Geology

Mount San Antonio College

Course Syllabus & Outline - Winter 2017



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Office Hours: TWT: 1:15-1:45 *or by appointment*

Class Meets: **TueWedThu, 10:30 - 1:10 in 61-1420**

Web Page: <http://faculty.mtsac.edu/mboryta/geol9.html>

COURSE DESCRIPTION: A course for non-science majors, dealing with the most relevant aspects of geological environment and the problems caused by modern human use of the Earth and its resources. Geologic hazards (earthquakes, volcanoes, landslides, floods, subsidence) are studied. Geological viewpoints concerning waste disposal, pollution, geothermal energy, fossil fuels and mining are emphasized. We will analyze geologic practices related to sound land management, conservation of resources and protection of the environment. Participation in a Field Trip is **required**.

FORMAT: Class will consist of group discussions, activities and lectures with multimedia presentations, videos and overheads to aid visualization. **Study Guides and some assignments will be on the Internet.**

TEXTBOOK: Pipkin et al., 2014. *Geology and the Environment, Mt. SAC edition (7/e)*

SUGGESTED PREPARATION: Students who have passed ENGL1A have reported feeling more confident and comfortable with the concepts and material presented in this course.

SLOs: The course's Student Learning Outcomes (Measurable Objectives) are at webcms.mtsac.edu/webcms/search.asp and on the introductory pages of your textbook.

GENERAL INFORMATION: Environmental issues touch your life every day. You make decisions that affect the world around you; to do this *responsibly*, you must have an understanding of the material presented in this class. There are many jobs available at all levels of training in environmental geology, too! Questions pertaining to the subject matter are strongly encouraged – no, **requested!** - at any time, in class or by e-mail (lengthy discussions or questions about material beyond the scope of this class may need to be postponed/resumed at another time).

COURSE REQUIREMENTS: I assume that you have made the choice to sign up for this class because *you want to learn* about how you interact with the world around you. In order to take full advantage of your educational opportunity, here are some things you can do and skills you should have or work on:

1. First, if this class seems difficult for you, seek help from me AS SOON AS YOU CAN. I am here to help!
2. **Come to each and every class, on time;**
3. **Read the assignments prior to coming to class.** ("College level rigor" has been defined for a 16-week semester as a *minimum of three hours of work per week per unit of credit*, including class time);
4. **TAKE PART IN CLASS!** This class is for YOU, so try to answer and ask questions!
5. **Take good notes** on the important concepts as you read and as you pay attention in class. You should ALWAYS have your pen/pencil moving on paper – listening is NOT GOOD ENOUGH!! If you've read the text ahead of time, you'll know how to spell new words and you won't have to write everything down! It may help you to **rewrite your notes** after each class;
6. **STUDY the illustrations!** The adage that "a picture is worth a thousand words" applies to your textbook;
7. **Attempt the review questions** and be familiar with the Key Terms at the end of each chapter; and
8. **Start studying now** for the next exam! The best ways to do that are to
 - a. download the study guide from the Internet, and
 - b. involve yourself in a study group.
9. Finally, if this class seems difficult for you, seek help from me AS SOON AS YOU CAN. I am here to help!

Your grade will be based on your **understanding** of course material as assessed by (nearly) daily quizzes, activities, a class field trip, 4 midterm exams, and a **comprehensive Final Exam**. There *may* be extra credit exercises offered at various times throughout this short Winter session, but these will NOT make up for otherwise poor performance!

QUIZZES: About every DAY STARTING THE FIRST WEEK there will be a short multiple-choice quiz during class. These will *not* be announced; **no makeup quizzes will be given**. You will need a #2 pencil and **SCANTRON Card (Form #815-E)** to complete each quiz. Each quiz will be worth 10 points, and will cover reading assignments and material since the last quiz.

ACTIVITIES: There will be various in-class activities throughout the semester; these will be worth various points. Activities will include such things as presentations and reports. More information will come separately...

FIELD TRIP: Participation in a one-day field trip is required; details will be available later. You can earn up to 50 points for **actively participating** in a field trip and **turning in** the assignment that's given, but **if you do not fulfill the field trip requirement, you will get an "F" in the class!**

EXAMS: There will be FOUR "midterm" exams and a COMPREHENSIVE FINAL EXAM. These involve some combination of multiple-choice, true/false, and short answer/essay. For these you will need to bring a **calculator** (you may **not** use your phone), a **#2 pencil** and a **SCANTRON Card (Form 882)**. Exam dates are noted on the Outline; those dates will NOT change, but the exam content will reflect class progress. Exam values will be dependent on what has been covered; the four midterms will have point values of about 100, while the Final is worth about 200.

If you **must** miss *one* exam (**NOT INCLUDING THE FINAL – don't miss that!!**) for a verifiable medical emergency or your own death (**CHECK WITH ME**), you **may** be able to make it up for fewer points before it is handed back to the class. Legitimate excuses **MUST** be verified; beware, "I had a cold," "I overslept" or "I couldn't get a ride" don't qualify!

ELECTRONIC DEVICE POLICY: With the exception of calculators, **electronic devices** (cell phones, laptops, translators, etc.) **may not be used in class AT ANY TIME**, unless, of course, instructed to do so. If you text in class or your cell phone goes off in class, you will be **penalized 10 points** and your cell phone will be confiscated until the end of class! (Breaks too!)

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES: If you have special needs, please let me know as soon as possible so that I may assist you to be successful in this class. MtSAC will make reasonable environmental and academic adaptations that promote students' access and equitable participation. Students whose condition, either permanent or temporary, that may be impacted by environmental and/or academic barriers are strongly encouraged to approach their faculty and the disability office at the beginning of the term to discuss possible adaptations. DSP&S (Disabled Student Programs & Services) is located in the Student Services Building (9B), lower level closest to the west entrance. You may contact them at (909) 274-4290 (Voice) or 909-895-6634 (Video Phone for American Sign Language users).

ATTENDANCE: **It is important to come to class**. Reading the book does not affect your understanding of the material in the same way that interacting with others in class will; besides, some of the material we will cover is not found in your book. Since you chose this class over others, I will assume that you intend to be here, and if you miss a class then a real emergency has occurred. **As long as it is not an exam day, you need not bring an excuse, but you cannot make up a quiz** under any circumstances. If something is due, you must still turn it in on time; give it to a classmate or **e-mail it to me**.

Attending class means doing more than filling a seat. This is YOUR class, and YOU can get out of it what YOU put into it. You should have enough respect for yourself (YOUR time is valuable!) that you take every advantage of this opportunity to learn as much of this interesting and very important material as you can. Furthermore, you should not be disruptive – keep to the topic, **don't let your cell phone go off**, don't show up late or unprepared, don't snore, etc. You should always respect your peers.

Attendance Regulations: Roll is taken at the beginning of class each day. Starting with the **SECOND DAY** of class, you will be marked TARDY if you come in during roll but after your name is called, and you will be marked ABSENT if you are not present during roll. This means that even if you come in "only" 5 minutes late, you'll be marked *absent!* Furthermore, if you leave class early, you will be marked absent. **Excessive tardiness/absence will result in your grade being lowered - by one letter for every 2 absences!**

DROP POLICY: You should read the College Attendance, Drop and Withdrawal Policies (find them in the Schedule of Classes). In this class, if you missed the field trip, are not passing the class and/or are marked absent for **one exam or more than 2 classes** by the final drop date, I may drop you (unless you have cleared your circumstances with me). However, DO NOT *expect* me to drop you – if you are no longer attending class, you should take the initiative to drop or you may receive a grade of F! Remember, these rules are in place to help YOU succeed! Below are important drop deadlines for the current semester:

Last Day To: Is:	Add the Class Jan 11	Withdraw w/ Refund Jan 11	Withdraw w/ NO Refund and no "W": Jan 17	Withdraw Feb 1
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Cheating: Cheating is not tolerated. **A student who plagiarizes or cheats in any way shall fail the assignment, and** a letter will be written and placed in the student's file in Student Services. ***Just don't do it!***

Your grade in this course will be determined from my assessment of your understanding of the material, based on the total number of points you earn as a percentage of the total expected:

Mastery: **A** = >90%
 Solid: **B** = 80 - 89%
 Basic: **C** = 70 - 79%
 Partial: **D** = 60 - 69%
 Insufficient: **F** = <60%

Reading Assignments: The following is a TENTATIVE schedule indicating the order of topics and the textbook chapters to be covered. You should come to class having read and understood the material well enough that you are prepared to discuss it!

Date	<u>Lecture Topic: Environmental Geology</u>	Read
1/10	Introduction/Overview; Scientific Method; Humans, Geology and the Environment; Nebular Hypothesis for the Origin of the Solar System	1
1/11	The Earth System and Climate Change	2
1/12	Glaciation and Long-Term Climate Change	2, 11
1/17	Exam #1 covering Chap 1, 2 and 11; then we will begin with Earth	3
1/18	Solid Earth/Geologic Processes and Time	3
1/19	Earthquakes	4
1/24	Exam #2 covering Chap 3-4; then we will discuss Volcanoes	5
1/25	Weathering and Soils	6
1/26	Mass Wasting	7
1/31	Exam #3 covering Chap 6-8; then Groundwater Resources	8
2/1	Fresh-water (Groundwater) Resources	8
2/2	Surface Hydrologic Hazards	9
2/7	Exam #4 covering Chap 9-10; The Coastal Environment	10
2/8	The Coastal Environment	10
2/9	Mineral Resources and Society	13
2/14	Energy and the Environment	14
2/15	Waste Management and Geology	15
2/16	Exam #5 (Comprehensive)	