

# Environmental Earth Science – GEOL 105

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**Instructor:** Dr. Carla Grandy

**Telephone:** (650) 738-4383

**Office:** BLDG 07-7326B

**Office Hours:** T/TH 11:30-12:30

**E-mail:** [grandyc@smccd.edu](mailto:grandyc@smccd.edu). (Please include your class (i.e. Environmental Earth Science) in the subject of your email and your full name in the body of the email.)

Investigation of environmental earth science topics including aspects of weather and climate, ground and surface water, geologic processes and land forms, recovery and utilization of natural resources, air and water pollution, and energy. Emphasis on understanding and avoiding the dangers of natural hazards such as storms, floods, earthquakes, and landslides. Geology 105 is accepted for credit as Physical Science by the University of California and the California State University system.

## STUDENT LEARNING OUTCOMES:

Upon successful completion of this course, a student will meet the following outcomes:

1. Identify and explain the concepts, principles and interactions of Earth's systems and the interactions between geosphere, hydrosphere, atmosphere and biosphere.
2. Articulate how human activities affect the environment as well as how humans are affected
3. Recognize and propose options for mitigating geologic hazards.
4. Communicate complex scientific concepts in writing, verbally and in diagrams.

## MY GOALS FOR THE CLASS:

My ultimate goal is to engender in each of you an appreciation for the world around you and the processes that have shaped it. Especially in California, there are exciting examples of environmental earth science in action all around us and as you go through this class (if you don't already) you will start to notice how earth science affects your daily life.

In addition, this class is intended to help you practice thinking logically and reasoning through problems (rather than memorizing the answers). As you will learn, in science there are many questions that do not yet have answers. You will learn to think like a scientist and reason through problems with the information that is available. Finally, we will work on communication skills – both oral and written. No matter what your ultimate educational or professional goals, being able to think critically and communicate effectively to others will benefit you.

## INFORMATION & COURSE POLICIES

**Attendance:** Attendance is extremely important and any student may be dropped from the class due to excessive unexcused absences or for missing an exam without prior notification.

**Reading:** Readings will be made available on Canvas from online resources. This course does not require a textbook.

**Study Guides:** Study guides are available on the class website for each unit of the class. This is your road map for the course. Past students have found it extremely helpful and the people who use the study guide and answer the questions do better than those who do not. This is a guide to help you organize your thoughts from class and to keep you on track. The questions in bold print on the study guide are those the potential essay questions for exams. The exams and quizzes will not follow the study guide exactly, but they will help you to prepare.

**Internet and Email:** You must have access to the internet and email. Your quizzes for this class will be given online as well as many resources for the class available only through the website. There are student computing labs on campus, which are available for all students to use. If you do not have an email account or do not have experience using the internet, see me and I can direct you to resources on campus.

**Special Needs:** In coordination with the Disability Resource Center office, reasonable accommodation will be provided for eligible students with disabilities. For more assistance, please contact the DRC Bldg 5, Room 5132 or call 650-738-4228.

**Quizzes:** Quizzes will be given throughout the semester usually at the end of each unit.

**Exams:** The exams will be a combination of short answer/essay and multiple-choice. Exam dates are given on the schedule. Make sure you know when they are. You must bring a pencil and scantron for each exam. Make-up exams will only be given if you have a doctor's note or some other documentation stating that you were absolutely unable to attend class that day.

**Final Exam:** The final exam is comprehensive and will include multiple choice, short-answer, and sketches.

**In-Class Assignments:** You must be in class to receive credit for the in-class assignments. If you miss class, be sure to get the assignment, but I will not accept late assignments.

**Homework:** When assigned, homework assignments are due at the beginning of the next class. If you arrive late, I will automatically deduct 30% from your score.

Your grade will consist of the following:

2 Midterm Exams	200 points
Final Exam	200 points
In-class/homework/Quizzes	200 points
<b>Total:</b>	<b>600 points</b>

**Grading Standards:**

A	A-	B+	B	B-	C+	C	D	F
> 94	90-93.9	87-89.9	84-86.9	80-83.9	77-79.9	70-76.9	60-69.9	<60

**Classroom Etiquette:**

- Come to class on time
- If you have to come late or leave early, be courteous to your fellow classmates and to me
- If you must miss a class **IT IS YOUR RESPONSIBILITY TO FIND OUT WHAT YOU MISSED!!!**
- Turn off your cell phone
- Do not text in class
- Do not talk to each other while I am talking – if you have a question ask me

**Academic Integrity:**

- Cheating will not be tolerated. If I suspect that you are cheating you will earn a 0 for the assignment.
- If you do not understand a word on a test or quiz – ask me, not your neighbor. When you talk during a quiz or exam, I think you are cheating.
- Plagiarism is also cheating and will also not be tolerated. If you have questions regarding proper citation of information gained from outside sources, please ask me or a librarian to assist you.
- If I suspect that your are cheating, I will contact the Dean to assess the need for further action on the part of the College.

**How to succeed in this class:**

1. Come to class every day. If you have to miss class, talk with me before, arrange to get class notes from another student and keep up with the reading.
2. Keep a notebook with your syllabus, all of your class notes, and all of your handouts together in the same place.
3. Read the assigned sections from the textbook **BEFORE** class. This will enable you to participate in class discussions, in-class assignments, and to have a generally more rewarding geography experience.
4. Anything that we discuss in class may potentially appear on the exam. While the book and other readings are very important and will help you tremendously, **THE MOST IMPORTANT THING IS TO COME TO CLASS AND BE ENGAGED.** I write the test questions and if you are not here, you will not know what I think are the most important things!!! At times we will cover topics in lecture that are not in the book. I will almost always give you a back-up reference, but you have to be here to find that out. **BOTTOM LINE – YOU CANNOT JUST READ THE BOOK TO SUCCEED IN THIS CLASS.**
5. If you fall behind, are not doing as well as you would like, or just want some advice -- come see me. If you are having problems, don't wait until half way through the semester – sooner is better.

**This schedule is tentative and subject to change:**

Class	Date	Topic
1	1/17	Intro to class
2	1/19	Intro to Environmental Geology + Population
3	1/24	Water Resources
4	1/26	Water Resources
5	1/31	El Niño
6	2/2	Water Conservation

7	2/7	Water Conservation
8	2/9	Water Pollution
9	2/14	Water Pollution
10	2/16	<b>Catch-Up</b>
11	2/21	<b>Exam 1</b>
12	2/23	Intro to Atmosphere Air Pollution
13	2/28	Atmospheric Pollution
14	3/2	Disruption Video
15	3/7	Greenhouse Effect
16	3/9	Natural and Anthropogenic Forcing Agents
17	3/14	Feedback Loops + Impacts of Climate Change
18	3/16	Impacts + Anthropocene
19	3/21	Climate Denial and Ozone Depletion vs. Climate Change
20	3/23	Hurricanes
21	3/28	Geologic Impacts of Climate Change
22	3/30	Honors Projects
23	4/11	<b>Catch up/Review</b>
24	4/13	<b>Exam 2</b>
25	4/18	Switch Part 1 + Fossil Fuel Resources
26	4/20	The High Cost of Coal
27	4/25	Fossil Fuel Resources cont'd + Switch Energy Video Part 2
28	4/27	Make Alternative Energy Poster
29	5/2	Present Alternative Energy Poster
30	5/4	Campus Energy Audit
31	5/9	Controversial Energy Sources
32	5/11	Solutions to Environmental Issues
33	5/16	<b>Review</b>