

ES 100: The Earth as a System

Spring 2012

Class #31204 – MW 11:00-12:20 – Room NS-131

Instructor: Professor P. Deen

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Office Hours: Monday-Thursday 8:00-9:00 and Tuesday 1:00-2:00 and by appointment

Professor Deen's Home page: <http://daphne.palomar.edu/pdeen/>

- Click on the Earth Science link. You will find useful information including details of assignments, study guides, and class quiz questions. You should visit this site often!

Text: Lutgens & Tarbuck, Foundations of Earth Science, 6th ed. Pearson Prentice Hall, 2011.

- The publisher companion website contains a variety of practice quizzes, links to internet resources, and even virtual field trips! Students with new copies of the textbook have full access to the book's companion website. Register at www.mygeoscienceplace.com. For students with used copies, website access without the e-text is \$30. The e-text plus website is \$92.50.
- Bring your textbook to each class for easy reference to important figures and diagrams

Earth Revealed Series: This series of 1/2-hour programs is available on-line and serves as a supplement to the textbook: <http://www.learner.org/resources/series78.html>. Students are encouraged to watch all of these videos. Appropriate videos for each section are listed on the student study guide.

COURSE OBJECTIVES

Earth Science 100 is a survey course that will provide a foundation to understand Earth and its processes. Many people go about living on this planet without a thought about how their everyday lives are shaped by this planet and its place in the universe. Earth is a living machine that shapes our lives every day whether we realize it or not—just ask the people of Japan and Louisiana! The objective of this course is to develop an understanding of the components of the Earth sciences and their interaction as a system in space and time. The components include **geology, geography, meteorology, oceanography**, and **astronomy**. We will discuss topics ranging from natural resources to natural disasters, rock cycles to carbon cycles, and ice ages to comets. Understanding the world around us is important. Some topics include:

- How valuable could a rock be?
- Could San Diego get hit with a Japan-sized tsunami?
- Why does Earth have "Ice Ages?"
- What is El Niño?
- Did a meteorite impact really kill off the dinosaurs?

Because of the diversity of the subject matter, it is not possible to cover all areas with equal emphasis or in a comprehensive manner. The main point is to gain an understanding and appreciation of the dynamic processes and inter-related systems that shape our planet.

Note: This course was specifically developed to satisfy the science requirement for students in the Liberal Studies Program at CSUSM. Although it is transferrable for all students, activities and assignments may be designed with these future teachers in mind.

CLASS ATTENDANCE

To do well in a class in sunset watching, you must be present to watch the sunset! You are expected to attend every class and to be on time. Although your attendance will not be directly factored into your grade, your grade will reflect your attendance. Most exam material will be from class lecture and discussions. A significant part of class time will include films and slides related to concepts you will be expected to understand. If you are absent, please call/e-mail me or contact a friend in the same class to get notes. Also, check out the instructor's home page for assignments.

COURSE SCHEDULE (subject to change)

Sem. Week	Dates	Topic	Textbook Chapter(s)
1	1/18	Introduction to Earth Systems and Scientific Inquiry	Introduction
2	1/23 & 1/25	Minerals—Building Blocks of Rocks	1
3	1/30 & 2/1	Rocks & the Rock Cycle (Scantrons due 1/30)	2
4	2/6 & 2/8	Exam #1 (Intro, Ch 1 & 2) / Mass Wasting / Streams	3
5	2/13 & 2/15	Streams / Groundwater	3
6	2/20 & 2/22	Holiday / Geologic Time--Stories from the Grand Canyon	8
7	2/27 & 2/29	Exam #2 (Ch 3, 8) Forces Within: Plate Tectonics & Boundary Processes	5,6,7
8	3/5 & 3/7	Forces Within: Volcanism & Igneous Activity	7
9	3/12 & 3/14	Forces Within: Earthquakes / Exam #3 (Ch 5, 6, & 7)	6
Spring Break—No Classes			
10	3/26 & 3/28	Heating the Atmosphere Moisture, Clouds & Precipitation	11, 12
11	4/2 & 4/4	The Atmosphere in Motion	13
12	4/9 & 4/11	Exam #4 (Ch. 11, 12, & 13) Weather Patterns and Severe Weather	14
Saturday 4/14 8:00 a.m. – noon		➤Optional/Extra Credit Field Trip—Coastal Processes	
13	4/16 & 4/18	Ocean Circulation and Climate / El Niño Southern Oscillation	10 (part)
14	4/23 & 4/25	Exam #5 (Ch. 10 & 14) / Ice Ages and Climate Change	4 (part)
15	4/30 & 5/2	Ice Ages and Climate Change / Tour of the Solar System	15
16	5/7 & 5/9	Meteorites and the K-T Boundary / Stars and Galaxies	16
Monday 5/14		Exam #6 (Ch. 15, 16 + special topics)	

GRADING

Distribution of Points	Percent	Grade
<ul style="list-style-type: none"> Exams (6) – 300 points / 60% Assignments – 100 points / 20% 	90--100% 80-- 89 67-- 79 55-- 66 <55	A → superior understanding of the topic B → accurate grasp of the topic C → acceptable, but commonplace understanding of the topic D → limited understanding of the topic F → little or no grasp of the topic

Note: The number of points given for each exam is ½ the % score. For example, if a student scores 80%, 40 points will be assigned.

Exams

Exams are a combination of 30 to 50 true/false and multiple choice questions. You will have approximately 30 minutes to complete each exam; exams will be followed by lecture time. Exams will cover the chapters indicated on the schedule.

- **Students must submit 5 clean 100-question (50 answers per side) scantron forms (#882) to me by Jan. 30.** I will distribute these on exam day.

➤ **Bring a #2 pencil to exams.**

You must take all exams. In the extraordinary event that you miss taking the exam at the designated time, you may make up one missed exam.

- ✓ You must contact the instructor the day of the exam and arrange to take the exam before the next class meeting (if extenuating circumstances makes this impossible you must also provide any information the instructor deems appropriate before a make-up exam can be scheduled).
- ✓ Any other missed exam will be assigned a zero.

The last exam will be taken during the final exam period. It will cover the material presented and discussed after Exam #5 and will be the same format as other exams.

Assignments

Assignments are designed to help you better understand course material and prepare for exams. Assignments may include reading journal articles, watching videos, investigating a topic on the Internet, or completing a handout from class. Information associated with assignments is considered part of the course content; questions associated with this information will be a part of each exam.

- All information on assignments must be in the students own words, unless appropriately referenced. No plagiarism allowed (this includes other students' work!).
- All papers must be typewritten; handouts with fill-in questions may be **neatly** handwritten. If I cannot read your paper with ease, I will return it to you without credit.
- Assignments are considered **due at the beginning of class** on the day specified.
 - If you walk in late I will not accept your assignment.
 - If you are absent on the day an assignment is due, I will accept it via e-mail sent by the time class begins. However, you must turn in a hard copy upon your return for me to grade.
 - With one exception (see coupon) I will not accept late assignments for any reason.

WORK EXPECTED

This is a 3-unit course transferable to a CSU or UC school. Although the process may be different, the expectations for learning are the same. As in most any entry-level course, you will be expected to learn a whole new vocabulary centered on the scientific description of Earth and its processes. Plan to spend at least 3 hours studying for each hour of in-class time (if science "isn't your subject", or your reading skills are weak, it will take more). In other words, **you will spend 3 hours per week attending class plus approximately 9 hours per week of "quality time" devoted to studying for this class per week!!** (Don't expect to "cram" at the last minute before exams...trust me, it won't work.) You should not only have a basic understanding of the meaning of vocabulary words but also be able to draw a visual image of the word and how it fits into the overall scope of the topic--ask yourself what, where, when, why, and how. For some tips on studying, see "*Study Skills and Simple Strategies Suggested by Successful Students*" on the class web site.

As part of your study time, visit the publishers website mygeoscienceplace.com to check out animations and practice quizzes (you'll see some familiar questions on exams).

The chapters listed on the course schedule are considered reading assignments. For optimal learning, read the assigned chapter prior to class. You must also **bring your text to class**, as I will refer to it during class meetings. You will want to make note of specific diagrams that were discussed, as their content will show up on exams. Also **bring a few colored pencils and a highlighter** to each class to use in your notes and text.

Course Student Learning Outcomes (SLO's)

Successful students should be able to meet the following Student Learning Outcomes:

1. Describe the dynamic processes involved in tectonic plate motions, including the characteristic processes and landforms associated with tectonic plate boundaries.
2. Describe the frontal components, weather patterns, and general motions of a midlatitude cyclone.

Note: Students must also be able to describe and explain many, many other terms, concepts, and processes in order to successfully complete this class.

The above SLO's are a response to mandates by an educational bureaucracy that seeks to do meaningful things, but ends up generating work for faculty, administrators, and a host of new bureaucrats. The result of such a process is nebulous at best. Any student wishing to investigate SLO's can visit the website:

<http://www2.palomar.edu/slo/default.html>

Students with Disabilities

If you have a disability that requires some accommodation, please speak with the instructor and provide documentation within the first two weeks of class. Reasonable accommodation will be made.

CLASSROOM ETIQUETTE

My job is to facilitate student learning. The classroom must have an environment where all students can focus and learn. To that end, students must respect the following:

- **Be on time.**
- **Be prepared.** Make sure to have your textbook and note-taking materials ready for each class. Have any assignments ready to turn in before you walk in the door.
- **Be polite and respectful.**
 - Turn off and put away all i-pods/cell phones before class begins. Use of electronic devices is not permitted at any time.
 - If you have a question, don't have a conversation with your neighbor, raise your hand and ask me.
 - Do not expect to come and go during class time. If you must leave, don't come back until there is a break.
 - Do not eat in the classroom--the mess and smell of food is distracting.
 - Pay attention and focus on the information and task at hand.
 - Do not start putting your books/papers away before I have dismissed class.
 - In all ways, make sure you are not a distraction to other students in the class. **Note:** If you are being distracted by another student's behavior or inappropriate use of technology, you have the right to inform the instructor, who will take action.
- **Be honest.** Students must conduct themselves in accordance with the Student Code of Conduct as published by Student Affairs on the Palomar College website. This applies to all forms of plagiarism and cheating. Any incidents will result in an "F" on such assignment/exam. I reserve the right to deal with any violations as set out by the Dean of Student Affairs.
- **I reserve the right to ask a student to leave due to any improper or distractive behavior. Before you return to class, you must contact me and then come for a conference in my office.**

ADD/WITHDRAWAL INFORMATION

Only students who are officially registered may participate in this class. If you are given a permission code to add this class, you must officially add the class prior to the next class meeting. The deadline for adding any class using a permission code is **January 29.** Under no circumstance will students be allowed to add this class after the add deadline.

Through Feb. 15	Feb 16 through March 10	March 11 to end of semester
Use E-Services to drop classes. No notation or grade will appear on your record. Last day to qualify for a refund is Jan. 30	Use E-Services to drop classes. A "W" will appear on your record.	No drops are allowed. An evaluative grade (A, B, C, D, F, FW) or "I" must be given.

Please note that **it is the student's responsibility** to initiate the procedure of withdrawing from a course by filing the proper form with administration; I will not do this for you. Although you officially do not need to inform me of your withdrawal, I would appreciate the chance to talk to you before you do so.