

PHYSICAL GEOLOGY - GEOLOGY 1
Mondays and Wednesdays, 6:30 – 9:40 PM (Section #0197) - Fall 2010
Sonjia Leyva

INSTRUCTOR INFORMATION:

Office: E210G

E-mail: smleyva@pasadena.edu

Phone: (626) 585-3327

WEB: <http://www.geophile.net/College>

REQUIRED MATERIALS:

- EARTH: A Portrait of a Planet by Stephen Marshak, 3rd Edition, in addition to handouts & videos. (also available as an ebook at http://www.wwnorton.com/gateway/entry.asp?site=earth3_ebook)
- Lecture Notes by Sonjia Leyva, available at the bookstore or at <http://www.geophile.net/College/Geology.htm>
- Tracing paper, ruler (standard & metric), color pencils, plus other materials
- A Blackboard account at PCC's Blackboard website (<http://pcc.blackboard.com>)

PURPOSE OF THIS COURSE

The purpose of this course is to provide you with a basic understanding of the chemistry and physics of the earth, show the dynamic nature of our planet, and to familiarize you with geological terminology and the scientific method. Whatever profession or vocation you choose, as a citizen and a voter you will have to make decisions concerning problems either directly or indirectly related to the earth sciences, and the oceans in particular.

STUDENT LEARNING OUTCOMES

In a broader sense, students will finish this class with the following:

1. Ability to synthesize and analyze oral and written information.
2. Make empirical observations in a laboratory setting.
3. Apply the system approach to Earth science studies.
4. Understand and explain theory of plate tectonics.

METHODS OF EVALUATION, GRADING, ATTENDANCE:

Exams - There will be three exams, each worth 200 points. **Make-up exams will be given only to those who can verify a valid excuse for missing an exam.** The make-up will be given at a time that is mutually agreeable to both the student and myself, but must be arranged prior to the initial exam. **Failure to take the make-up exam within two weeks of the original exam date will result in the missed exam counting in as a zero.**

Weekly Quizzes – Students are required to log onto Blackboard and take a weekly quiz. Each quiz will be worth 30 points and will cover what we have learned (or will learn) in class that week. Students may access the quiz anytime from 8 am Saturday through midnight the following Friday. Students may take the quiz only once. Students who do not take the quiz during the allowed time will not be allowed to make up the quiz unless they have an excused absence. **No exceptions!**

Homework/Activities - There will be several in-class activities during the course of this class. You are responsible for bringing in the necessary supplies. In addition, you may be responsible for answering a few of the “end-of-chapter” review/critical thinking question. Each assignment is worth 40 points each. You will be graded on neatness, completeness of activity, and ability to follow directions. **Late work will not be accepted. Students who miss a class due to an unexcused absence will NOT be allowed to make up the work.** Make-up assignments will be given only to those who can verify a valid excuse for missing the assignment. The make-up assignment will given at a time that is mutually agreeable to both the student and myself. **Failure to take the make-up assignment within one week of the original assignment date OR before the last week of class will result in the missed exam//assignment counting in as a zero. All proof of excused absences MUST be shown PRIOR to the student making up the assignment/exam, and MUST be BEFORE the last day of class.**

Attendance - Students are expected to attend each class session and to arrive on time. Funding for this college is based on student attendance, therefore **YOU MUST ATTEND CLASS** if you wish to get credit for this course. It will be difficult to make up missed class sessions. However, if you miss a class session of valid reasons (illness), it will up to you to make arrangements to complete the activity. **Students who miss a class due to an unexcused absence will NOT be allowed to make up the work.** Make-up labs/assignments will be given only to those who can verify a valid excuse for missing the assignment. The make-up lab/assignment will given at a time that is mutually agreeable to both the student and myself. **Failure to take the make-up lab/assignment within one week of the original lab/assignment date OR before the last week of class will result in the missed exam/lab/assignment counting in as a zero.** Students may be dismissed for 10 hours of absence. If you drop the class you must do so officially or you may receive an "F".

Assessment - Your grade in this class is based upon the points YOU earn through completing assignments, quizzes, presentations, and exams. Nothing in this class is curved. Your grade is based upon your performance. Your final grade in this class is based on your percentage score out of 1500 points. See the table below.

You may do up to 20 points of extra credit work to raise your total points earned (please see attached list). **All extra credit is due the last day of class – not the day of the final.** By doing extra credit you agree that you will NOT ask to have your grade "bumped up" at the end of the semester.

	Points Possible	Total Points Possible	% of Grade
Exams	3 exams at 200 points each	600	40.0%
Quizzes	10 quizzes at 30 points each	300	20.0%
Activities	15 activities at 40 points each	600	40.0%
		1500	100%

Your grade is based on your percentage score out of 1500 points.

You may do up to 20 points of extra credit work to raise your total points earned (please see attached list). All extra credit is due the last day of class – not the day of the final.

A = > 90%	> 1350.0 points
B = 80 - 89%	1200.0 - 1349.99 points
C = 70 - 79%	1050.0 - 1199.99 points
D = 60 - 69%	900.0 - 1049.99 points
F = < 60%	< 900.0 points

Want to get a good grade? Here's how:

- Attend every class.
- Take notes and review them after class and before exams.
- Read the textbook.
- Ask questions. **You** are responsible for studying.

TENTATIVE SCHEDULE

Date	Lecture	Activity	Chapter
8/30	Introduction		1
9/1	Continental Drift	Map Atlas Project (p. 170 – 174)	3
9/6	Labor Day - Campus Closed		
9/8	Layers of the Earth	Map Atlas Project (p. 170 – 174)	2
9/13	Plate Tectonics	Map Atlas Project (p. 170 – 174)	4
9/15	Plate Tectonics	Map Atlas Project (p. 170 – 174)	
9/20	Geologic Time	Geologic Time (p. 176 – 184)	12
9/22	Geologic Time	Geologic Time (p. 176 – 184)	
9/27	Earthquakes	Faults (p. 130 – 137)	10
9/29	Flex Day – Classes Canceled		
10/4	Earthquakes	Earthquakes (p. 139 – 149)	10
10/6	Video: The Wave That Shook the World		
10/11	Mass Wasting	-	10
10/13	Mineral Resources	-	15
10/18	Mineral Resources	-	
10/20	Exam #1: 6:30 p.m. to 8:30 p.m.		
10/25	Minerals	Intro to Mineral Properties (p. 15 – 28)	6, 9
10/27	Igneous Minerals	Igneous Rock-forming Minerals (p. 30 – 39)	
11/1	Sedimentary Minerals	Sedimentary Rock-forming Minerals (p. 41 – 43)	7
11/3	Sedimentary Minerals	Finish up Sand & Sediment and Sed Rock ID	
11/8	Metamorphic Minerals	Metamorphic Rock-forming Minerals (p. 45 – 46)	8
11/10	Ore Minerals	Ore Mineral Identification (p. 48 – 53)	15
11/15	Exam #2: 6:30 p.m. to 8:30 p.m.		
11/17	Igneous Activity	Igneous Rock Identification (p. 68 – 85)	6, 9
11/22	Igneous Rocks	Igneous Rock Identification (p. 68 – 85)	
11/24	Sedimentary Environments & Rocks	Sand & Sediment (p. 87 – 98)	7
11/29	Sedimentary Environments & Rocks	Sedimentary Rock Identification (p. 100 – 111)	
12/1	Sedimentary Environments & Rocks	Finish up Sand & Sediment and Sed Rock ID	
12/6	Metamorphic Environments & Rocks	Metamorphic Rock Identification (p. 113 – 125)	8, 11
12/8	Metamorphic Environments & Rocks	Metamorphic Rock Identification (p. 113 – 125)	
	<u>12/8 - LAST DAY TO TURN IN EXTRA CREDIT (beginning of class)</u>		
12/13	Exam #3: 6:30 p.m. to 8:30 p.m.		

Activities:

There will be several in-class activities during the course of this class. You are responsible for bringing in the necessary supplies. In addition, you may be responsible for answering a few of the “end-of-chapter” review/critical thinking question. Each assignment is worth 40 points each. You will be graded on neatness, completeness of activity, and ability to follow directions. **Late work will not be accepted.**

Pages	Topic	Points Possible	Date Due
p. 170 – 174	Map Atlas Project (4 maps)	160	9/20
p. 176 – 184	Geologic Time	40	9/27
p. 130 – 137	Faults	40	10/11
p. 139 – 149	Earthquakes	40	10/13
p. 15 – 28	Intro to Mineral Properties	40	11/3 11/1
p. 30 – 39	Igneous Rock-forming Minerals	40	11/8 11/3
p. 41 – 43	Sedimentary Rock-forming Minerals	40	11/15 11/10
p. 45 – 46	Metamorphic Rock-forming Minerals	40	11/17 11/15
p. 68 – 85	Igneous Rock Identification	40	11/24
p. 87 – 98	Sand & Sediment	40	12/6
p. 100 – 111	Sedimentary Rock Identification	40	12/6
p. 113 – 125	Metamorphic Rock Identification	40	12/13

Quizzes:

Students are required to log onto Blackboard and take a weekly quiz. Each quiz will be worth 25 points and will cover what we have learned (or will learn) in class that week. Students may access the quiz anytime from 8 am Saturday through midnight the following Friday. Students may take the quiz only once. Students who do not take the quiz during the allowed time will not be allowed to make up the quiz unless they have an excused absence. **No exceptions!**

Quiz #	Topic	Dates Available
1	Introduction / Continental Drift	08/30 – 09/10
2	Layers of the Earth / Plate Tectonics	09/11 – 09/17
3	Geologic Time	09/18 – 09/24
4	Earthquakes	09/25 - 10/01
5	Mass Wasting & Mineral Resources	10/09 – 10/15
6	Minerals & Igneous Rock-forming Minerals	10/23 – 10/29
7	Sedimentary & Metamorphic Rock-forming Minerals	10/30 – 11/05
8	Igneous Activity & Rocks	11/13 - 11/19
9	Sedimentary Environments & Rocks	11/27 – 12/03
10	Metamorphic Environments & Rocks	12/04 - 12/10

Exams:

There will be three exams, worth 200 points each. **Make-up exams will be given only to those who can verify a valid excuse for missing an exam.** The make-up will be given at a time that is mutually agreeable to both the student and myself, but must be arranged prior to the initial exam. **Failure to take the make-up exam within two weeks of the original exam date will result in the missed exam counting in as a zero.**

Exam #	Topic	Date
1	Introduction, Plate Tectonics through Mineral Resources	10/20
2	Minerals (practical exam – mineral identification)	11/15
3	Rocks (practical exam – rock identification)	12/13

EXTRA CREDIT

You have the opportunity to earn extra credit if you wish. **All work must be turned in the class period before the final exam.** You may earn up to 20 points extra credit by doing any combination of the following assignments listed below. PLEASE NOTE: Please DO NOT ask for me to "bump" up your grade at the end of the semester – by doing extra credit you have already enhanced your grade in this class and will not be eligible for any more "extra" points, no matter how close you are to the next grade up.

FORMAT for Reports (for #1 - #3):

- 1 to 2 pages, typed, 1.5 spacing, standard margins and fonts and concise.
- The quality of your English composition is important.
- Don't forget to use correct essay form - Intro paragraph with thesis statement, three examples, and conclusion paragraph.
- Don't forget to cite your references in the appropriate format.
- Make sure your name is on your report.
- Please remember that I am concerned about the environment. I do not want plastic covers, extra cover pages, or any other type of binder. Save paper and you save trees. Save plastic and you save petroleum.

1. In essay format, discuss three ways that you can help clean up the oceans or coasts. (5 points)
2. Find 3 articles that deal with geological issues and write a summary of each article. Combine the 3 summaries into a paper that is no more than 2 pages long. Articles may be found in the Los Angeles Times, Discover Magazine, Newsweek, Time Magazine, California Geology (in the Library), etc. Use published papers, not Internet articles. Provide your opinion or analysis. A bibliography and copies of your articles are required as well. (15 points)
3. Write a book report on any one of the books listed below. (15 points)
 - a. "Control of Nature" by John McPhee
 - b. "Rising Tide: The Great Mississippi Flood of 1927 and How It Changed America" by John M. Barry
 - c. "Entropy: Into the Greenhouse World" by Jeremy Rifkin
 - d. "Manmade Disaster: The Story of the St. Francis Dam Disaster" by Charles Outland
 - e. "The Johnstown Flood" by David McCullough
 - f. "Cadillac Desert: The American West and its Disappearing Water" by Marc Reisner
 - g. "Earthquake: The Destruction of San Francisco" by Thomas Gordon and Max Witts
 - h. "The Day the World Ended" by Thomas Gordon and Max Witts (This is the story of the eruption of Mt. Pelee and the destruction of St. Pierre.)
 - i. "Salt: A World History" by Mark Kurlansky
 - j. "Isaac's Storm: A Man, A Time, and the Deadliest Hurricane in History" by Erik Larson
4. Do one of the Virtual Classware assignments located at <http://www.sciencecourseware.com/>. Click on either "Virtual Courseware for Earth and Environmental Sciences" or "Geology Labs Online" and choose one of the following: Global Warming, Virtual Earthquake, Virtual Dating, or Virtual River. Upon completion of the assignment, you will be awarded a certificate that you will need to print out and turn in. You may do more than one of the exercises. (10 points)
5. Your textbook has a website with self tests, and you may do ONE self test (either multiple choice, true/false, identification, etc) PER chapter, for every chapter we cover in class. Email me the results, but also either print out or email a copy to yourself as well. See your class syllabus for the URL of your textbook's website. (1 point per chapter)

IMPORTANT POLICIES (a.k.a. the “fine print”)

Your enrollment in this class indicates that you agree to abide by these policies!

- **Statement of Reasonable Accommodation:**
 - Pasadena City College faculty members fully support the Americans with Disabilities Act (ADA). Pasadena City College provides reasonable accommodations to facilitate the participation of students with qualified disabilities. Questions about, concerns with, and requests for reasonable accommodations or additional information may be addressed to Disabled Student Programs and Services (D209).
 - Reasonable accommodation may involve allowing a student to use an interpreter, note taker, or reader; accommodation may be needed during class sessions and for administration of examinations. The intent of the ADA in requiring consideration of reasonable accommodation is not to give a particular student an unfair advantage over other students, but simply to allow a student with disability to have an equal opportunity to be successful.

- **Student Conduct:**
 - Policy No. 4520: It is the policy of the Pasadena Area Community College District that Pasadena City College seeks to maintain a safe, orderly, and constructive campus environment in which there is freedom to learn and respect for the dignity of all members of the College community. Students are expected to be responsible, honest, and non-violent in exercising their rights to free inquiry and free speech.
 - The Student Conduct Code identifies conduct that is prohibited by College policy. Students who violate the Student Conduct Code will be subject to disciplinary action under the Student Discipline Process Procedures. Disciplinary sanctions depend on the nature of the offense, the past pattern of behavior of the student, and other relevant factors. In addition, student drug or alcohol offenses or other criminal acts, may be referred to law enforcement officials.
Cheating and plagiarizing will not be tolerated.

- **Absences:**
 - All absences are considered unexcused unless valid proof of the absences is submitted. All proof of excused absences **MUST** be shown **PRIOR** to the student making up the assignment/exam, and **MUST** be **BEFORE** the last day of class. Please contact me by email if you know you will be absent on a certain date, and why.
 - Students who miss a class due to an unexcused absence will **NOT** be allowed to make up the work. Make-up assignments will be given only to those who can verify a valid excuse for missing the assignment. The make-up assignment will given at a time that is mutually agreeable to both the student and myself.
 - Failure to take the make-up assignment within one week of the original assignment date **OR** before the last week of class will result in the missed exam//assignment counting in as a zero.

- **Grading:**
 - Pasadena City College policy allows a grade of incomplete to be given only to those who have been sick, injured, or have a similar valid excuse. A grade of “incomplete” will not be given after poor performance in the course.
 - Pasadena City College grading system guidelines can be found in the current catalogue. Students may access this catalogue online at <http://pasadena.edu/catalog/Section2.htm>.
 - College policy requires that all students shall be graded in *exactly* the same fashion. What does this mean? **You may not ask for extra assignments or to repeat an exam to improve your grade, or additional assignments after the course is completed.**
 - Grades in this class are based upon points earned on assignments, quizzes, and exams. All assignments will be returned to the student after grading. Periodic progress reports will be emailed to students so that they may keep track of their progress in the class. Students are responsible for contacting me **BEFORE** the final exam with any errors or omissions.
 - You may do up to 20 points of extra credit work to raise your total points earned (please see attached list). All extra credit is due the last day of class – not the day of the final exam. By doing extra credit you agree that you will **NOT** ask to have your grade “bumped up” at the end of the semester.
 - **Your final grade is based upon the points you EARN in the class. Thus, you do not “deserve” a certain grade – you earn it.**