**PHYSICAL GEOLOGY - GEOLOGY 1**

**Mondays and Wednesdays, 6:30 – 9:40 PM (Section #** **3691) - Fall 2013**

**INSTRUCTOR INFORMATION:
 Instructor: Professor** Sonjia Leyva**Office**: E210G

**E-mail**: smleyva@pasadena.edu **WEB**: <http://www.geophile.net/College>

**REQUIRED MATERIALS**:

* Essentials of Geology 4/e by Stephen Marshak
* Lecture Notes by Sonjia Leyva, available at the bookstore or at <http://www.geophile.net/College/Geology.htm>
* Hand lens (purchase in E215, Geol Supply Room), state map of California (available at the AAA or most gas stations), tracing paper (11” x 17”), ruler (standard & metric), color pencils, plus other materials

**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.

**STUDENT LEARNING OUTCOMES**

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 – one lecture exam worth 200 points, one mineral exam worth 150 points and one rock exam worth 150 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 Canvas and take a weekly quiz. Each quiz will be worth 10 points and will cover what we have learned (or will learn) in class that week. Students may access the quiz anytime from 8 am Monday through 11:59 pm Sunday. 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 an average of 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 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.** 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”.

**METHODS OF EVALUATION:**

**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 800 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** | 1 exam at 200 points, 2 exams at150 points each | 600 | 50% |
| **Quizzes** | 10 quizzes at 10 points each | 100 | 8% |
| **Activities** | 15 activities at 40 points each | 500 | 42% |
|  |  | 1200 | 100% |
|  |  |  |  |
| Your grade is based on your percentage score out of 1200 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% |  > 1080.0 points |
| B = 80 - 89% | 960.0 - 1079.99 points |
| C = 70 - 79% | 840.0 - 959.99 points |
| D = 60 - 69% |  720.0 - 839.99 points |
| F = < 60% |  < 600.0 points |

|  |  |  |
| --- | --- | --- |
| **Cheating and plagiarizing will not be tolerated.** |  | **ANYONE caught cheating or plagiarizing an assignment will receive an “F” in the class. NO EXCEPTIONS.** |

**TENTATIVE SCHEDULE**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Lecture** | **Activity** | **Chapter** |
| 8/26 | Introduction |   | 1 & 2 |
| 8/28 | Plate Tectonics | Map Atlas Project  | 3 |
| **9/02** | **Labor Day Holiday-Campus Closed** |
| 9/04 | Plate Tectonics | Map Atlas Project | 3 |
| 9/09 | Plate Tectonics | Map Atlas Project  |
| 9/11 | Plate Tectonics | Map Atlas Project  |
| 9/16 | Video: Volcanoes of the Deep | Map Atlas Project  |
| 9/18 | Geologic Time | Geologic Time  | 13 |
| 9/23 | Geologic Time | Geologic Time  | 15 |
| 9/25 | Earthquakes | Faults | 12 |
| 09/30 | Earthquakes | Faults  |
| 10/02 | Mass Wasting | Earthquakes  | 18 |
| 10/07 | Video: Hunting the Elements | Earthquakes  |
| **10/09** | **Exam #1: 6:30 p.m. to 8:30 p.m.** |
| 10/14 | Minerals | Intro to Mineral Properties  | 4 |
| 10/16 | Minerals | Intro to Mineral Properties  |
| 10/21 | Igneous Minerals | Igneous Rock-forming Minerals  |
| 10/23 | Sedimentary Minerals | Sedimentary Rock-forming Minerals  |
| 10/28 | Metamorphic Minerals | Metamorphic Rock-forming Minerals |
| 10/30 | Ore Minerals | Ore Mineral Identification |
| 11/04 | Mineral ID Practice! |
| **11/06** | **Exam #2: 6:30 p.m. to 8:30 p.m.** |  |  |
| **11/11** | **Veterans Day Holiday-Campus Closed** |
| 11/13 | Igneous Activity | Igneous Rock Identification  | 5 & 6 |
| 11/18 | Igneous Activity | Igneous Rock Identification  |
| 11/20 | Sedimentary Environments & Rocks | Sedimentary Rock Identification | 7 & 8 |
| 11/25 | Sedimentary Environments & Rocks | Sedimentary Rock Identification  |
| 11/27 | Metamorphic Environments & Rocks | Metamorphic Rock Identification  | 9 & 11 |
| 12/02 | Metamorphic Environments & Rocks | Metamorphic Rock Identification  |
| 12/04 | Rock ID Practice! **-** **LAST DAY TO TURN IN EXTRA CREDIT (beginning of class)** |  |
| **12/11** | **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.**

|  |  |  |
| --- | --- | --- |
| **Topic** | **Points Possible** | **Date Due** |
| Map Atlas Project (4 maps) | 160 | 9/18 |
| Geologic Time  | 40 | 9/25 |
| Faults  | 40 | 10/09 |
| Earthquakes  | 40 | 10/09 |
| Intro to Mineral Properties  | 40 | 10/21 |
| Igneous Rock-forming Minerals  | 40 | 10/28 |
| Sedimentary Rock-forming Minerals  | 40 | 10/30 |
| Metamorphic Rock-forming Minerals  | 40 | 11/04 |
| Ore-forming Minerals | 40 | 11/06 |
| Igneous Rock Identification  | 40 | 11/20 |
| Sedimentary Rock Identification  | 40 | 11/27 |
| Metamorphic Rock Identification  | 40 | 12/04 |

**Quizzes:**

Students are required to log onto Canvas and take a weekly quiz. Each quiz will be worth 10 points and will cover what we have learned (or will learn) in class that week. Students may access the quiz anytime from 8 am Monday through 11:59 pm Sunday. 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 | Plate Tectonics I | 09/02 – 09/08 |
| 2 | Plate Tectonics II | 09/09 – 09/15 |
| 3 | Geologic Time  | 09/16 – 09/22 |
| 4 | Earthquakes  | 09/23 – 09/29 |
| 5 | Mass Wasting  | 09/30 – 10/06 |
| 6 | Minerals & Igneous Rock-forming Minerals  | 10/21 – 10/27 |
| 7 | Sedimentary & Metamorphic Rock-forming Minerals  | 10/28 – 11/03 |
| 8 | Igneous Activity & Rocks | 11/11 – 11/17 |
| 9 | Sedimentary Environments & Rocks | 11/18 – 11/24 |
| 10 | Metamorphic Environments & Rocks | 12/02 – 12/08 |

**Exams:**

There will be three exams – one lecture exam worth 200 points, one mineral exam worth 150 points and one rock exam worth 150 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**.

|  |  |  |
| --- | --- | --- |
| **Exam #** | **Topic** | **Date** |
| 1 | Introduction, Plate Tectonics through Mineral Resources | 10/09 |
| 2 | Minerals (practical exam – mineral identification)  | 11/06 |
| 3 | Rocks (practical exam – rock identification)  | 12/11 |

**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. 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)*

1. Your textbook has a website with self tests (<http://bcs.wiley.com/he-bcs/Books?action=index&bcsId=6217&itemId=047122037X> ), 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. (*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. ANYONE caught cheating or plagiarizing an assignment will receive an “F” in the class. NO EXCEPTIONS.**

* **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.**