

HILLSBOROUGH

Community College 

PHYSICAL GEOLOGY SYLLABUS

GLY 1010

Physical Geology

Fall - 2011

Instructor's Name: Marianne O'Neal Caldwell

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Email Address: Please use the email in our online classroom. Alternative email address: mcaldwell@hawkmail.hccfl.edu

Office Hours (Day, Time, Location):

Mondays at Dale Mabry Campus in DSCS 128, 8-9:30am and 12:15pm-12:45pm

Tuesdays online 8am-11am

Wednesdays at Dale Mabry Campus, DSCS 128; 8am-11am

Thursdays online 8am-10am

Also available by appointment

Class Schedule: Monday/Wednesday 11am-12:15pm

Course Description:

Covers basic geology and concepts and principles. Topics include origin and structure of the earth, processes involved in shaping the earth's crust, the nature and classification of earth materials, and the dynamic interactions of the lithosphere with the hydrosphere and the atmosphere that produce characteristic landforms.

Co-requisite: GLY 1010L

Course Objectives:

1. Describe the scientific method and discriminate between scientific and nonscientific information.
2. State the age of the Earth as determined by scientific means and divide geologic time into the established Eras, Periods, and Epochs of the Geologic Time Scale.
3. Describe the structure of an atom and discuss how atoms bond, relating this to the structure and properties of minerals.
4. Define what a mineral is and describe the relationship of minerals to rocks.
5. Describe the Rock Cycle, listing and relating its products and processes.
6. Describe how igneous rocks may be characterized by their texture, composition, and provenance.
7. Describe the origin of magma and the nature of intrusive and extrusive igneous processes and landforms.

8. Describe the Earth's differentiated structure and list the names and properties of the Earth's internal layers.
9. Describe and discuss the basic tenants of the theory of Plate Tectonics, including the origin of the theory, the types of plates, and the nature and consequences of their interactions.
10. Relate the theory of Plate Tectonics to the locations and occurrence of geologic hazards including earthquakes, tsunamis, and volcanic activity.
11. Describe the Hydrologic Cycle, both in general terms, and how it specifically relates to geologic processes.
12. Describe the formation, properties and classification of sedimentary rocks.
13. Describe the processes involved in metamorphism and discuss the textural and mineralogical changes that occur in metamorphic rocks.
14. List and describe the major types of crustal deformation and associated geologic structures.
15. Define and describe the processes of weathering, erosion, and mass movement (mass wasting).
16. Describe fluvial processes and landforms.
17. Describe the processes effecting shorelines and the resultant shoreline features.
18. Describe the distribution and movement of water in the earth's crust, relating this to Karst topography and other hydrogeological features such as springs, hot springs and geysers.
19. Describe the origin and nature of glacial landforms and the circumstances that have been hypothesized to explain the Pleistocene glaciations. Describe the role of wind as a geomorphic agent, listing the major types of aeolian erosional and depositional features, and the location of their occurrence.

Required Text Books:

Understanding Earth, 6th edition, by Grotzinger and Jordan
Notes and Study Guide, by M. Caldwell

Online Classroom:

A classroom website is available for student use. The classroom gradebook will be kept on the website so that students can access grades at any time. You may also use the classroom email for communications and upload assignments. Students are asked to login within the first two weeks. Follow the directions for login from the HCC website at: <http://www.hccfl.edu> You must know your student ID number to login. If you have problems, please contact HCC Live on the HCC home page.

Grading System:

100-90	A
89-80	B
79-70	C
69-60	D
Less than 60	F

Academic Dishonesty Policy:

Students enrolled in online courses are expected to exhibit academic honesty. Copying or sharing of work is not allowed. Use of outside resources during tests is not permitted. All writing assignments must be written in your own words.

Attendance Policy:

Students are expected to attend each class meeting and attendance will be recorded. Please arrive prior to the start time of each class. During the class students are asked to refrain from using cell phones for calls or text messages.

Instructional Methods:

The grades of the course will be partially based on four test grades and a cumulative final. The tests will be composed of multiple choice questions. You will need a scantron for each test. If a student misses a test, a makeup test must be completed on the next scheduled class day and will carry a 25 point penalty. You must also contact me prior to that day via email to arrange a makeup time. The makeup test will be composed of fill-in-the-blank, short answer, and essay questions. No makeup will be given for the final exam. At the beginning of the course a pre-class geology assessment will be administered. This assessment will be similar to a test but full-credit will be given for completion of the assessment.

Additionally a Powerpoint Presentation on a geological feature and a field trip to Upper Tampa Bay Park will be required. The Powerpoint presentation will consist of 10-15 slides describing the geology of a specific geologic feature. Detailed instructions and a grading rubric can be found in the document entitled "Instructions for Powerpoint Presentation".

The remaining portion of the grade will be based on in-class worksheets/writing assignments throughout the term. These assignments must be completed during class time (11am-12:15pm). If you miss a class time in which a worksheet/assignment was given, you receive a zero for that assignment. No late assignments will be accepted.

Grading for the class will be calculated as follows:

Four Tests (100 points each) 400 points
Pre-class Evaluation of Geology (50 points)
Powerpoint Presentation (140 points)
Sixteen Worksheets (10 points each) 160 points
Field Trip to Upper Tampa Bay Park 100 points
Final Exam (150 points)

Any extra credit points earned will be added to the 1000 point total.

Gordon Rule Assignments:

The Gordon Rule Requirement for this class will be fulfilled by summaries of the review questions for the class. The review questions can be found at the end of the chapter outlines. There will be four sets of review questions (one for each test). The summaries will be due the class period one week before each of the tests. Please make a copy for yourself before turning in the paper. The answers should be written in the student's own writing style and should answer at least twenty review questions. The reports should be typed and contain correct grammar and sentence structure. If the reports are turned by the respective due dates, up to 3 additional points may be added to your test as extra credit (maximum of 12 points). Those papers with incorrect grammar and not containing sentences will not be awarded extra credit. Note that only the typed summaries turned in on time will be counted for extra credit. Late reports or those not typed are not eligible for extra credit. Even if you choose to not earn extra credit at least one set of review questions must be submitted prior to the final class in order to fulfill the Gordon Rule

requirement. No review questions will be accepted via email. You must correctly upload the questions onto the classroom website.

Extra Credit:

Review quizzes are available for each of the chapters in the online classroom webpage. Although participation in these quizzes is optional, extra credit is available for correctly completing the answers on the quizzes.

Request for Accommodations:

If, to participate in this course, you require an accommodation due to a physical or learning impairment, you must contact the Office of Services to Students with Disabilities. The office is located in the Student Services Building, Room 208. You may also reach the office by telephone at (813) 253-7031 {voice line}; (813) 253-7035 {TTD}

Tentative Class Schedule M/W:

Aug.	22	Introduction
	24	Chapter 1
	29	Chapter 2
	31	Pre-class Geology Assessment
Sept.	5	No class; Holiday
	7	Chapters 2 & 3
	12	Chapters 3 & 4; Test I Review Questions Due
	14	Chapter 4
	19	TEST I; Chapters 1, 2, 3, 4
	21	Chapters 5 & 6
	26	Chapters 6 & 7
	28	Powerpoint Presentation Work (meet in computer lab; DSCS 215/217)
Oct.	3	Chapter 8; Test II Review Questions Due
	5	Chapter 12
	10	TEST II; Chapters 5, 6, 7, 8, 12
	12	Chapter 13
	17	Chapter 14
	19	Chapter 16; Test III Review Questions Due
	24	Chapter 17
	26	TEST III; Chapters 13, 14, 16, 17
	31	Chapter 18
Nov	2	Field Trip to Upper Tampa Bay Park
	7	Chapter 20
	9	Chapter 20 & 21
	14	Chapters 21 & 23; Test IV Review Questions Due
	16	Chapter 23
	21	TEST IV: Chapters 18, 20, 21, 23
	23	Powerpoint Presentations
	28	Powerpoint Presentations
	30	Powerpoint Presentations
	5	Final Exam Review
	12	Final Exam 11am

Frequently Asked Questions:

- 1) *I lost my syllabus. How do I get another copy?* Go to the online classroom and click on “course content”. You will find one posted there.
- 2) *I submitted my review questions but got 0 out of 3 because I did not write in complete sentences. Why can't I just write the answer down? Why do we need complete sentences?* The review questions serve to fulfill the Gordon Rule requirement for the class and thus must be written in correct grammar using complete sentences.
- 3) *I submitted my review questions but got 0 out of 3 because I cut and pasted all my answers from the internet. Why didn't I get more points?* The requirement for the assignment is that you write in your own words. Cutting and pasting straight from the internet is not “your own words”. If you use a resource besides the book and notes to answer the review questions, you should cite your source. Wikipedia is not a valid scientific reference.
- 4) *Where do I find the questions for the Test Reviews?* They are posted in the online classroom and in the back of the study guide purchased from the bookstore.
- 5) *There are extra chapters in the Study Guide that we are not covering. Why?* Different terms, different chapters may be covered. You can merely skip those chapters not on the syllabus in the study guide.
- 6) *I was sick and missed one of the tests. What should I do?* You must be prepared to take a makeup on the very next class meeting day. You must also contact me prior to that day via email to arrange a makeup time. There will be a 25 point penalty and the test will be essay/short answer/fill in the blank. You do not need to bring any documentation of illness.
- 7) *My computer does not have Microsoft Word or Powerpoint. How do I submit my answers to the review questions? How do I complete the Powerpoint Presentation?* Please use a computer available on campus for typing your Gordon Rule Review questions and the Powerpoint presentation.
- 8) *Where are the speaker notes for the Powerpoint Presentation?* When you open a blank Powerpoint Presentation, there will be a box at the bottom to “click to add notes”. That is where you type the speaker notes. There should be very little text on the slides.
- 9) *Why can each topic for the Powerpoint Presentation only be done by one person?* In order to learn about as many different facets of Geology as possible, as many topics as possible should be covered.
- 10) *I missed a class and therefore missed turning in one of the in-class worksheets/activities. Is there any way to make that up?* Unfortunately you cannot make up a missed worksheet. However, each worksheet is worth only 10 points out of a 1000 point total. There are also opportunities for extra credit listed above.
- 11) *How do I calculate my final grade?* To calculate your final grade simply add up total points earned and divide by 10.

12) *Why should I study Geology?* We will answer this throughout the class. Geology studies the forces of earth and their effects on humans.