



HOUSTON COMMUNITY COLLEGE SOUTHWEST
SYLLABUS FOR GEOL 1403 – PHYSICAL GEOLOGY
Spring 2012
Class Number 84693

Instructor contact information (phone number and email address)

Karen Blair Yip karen.yip@hccs.edu

Most of your contact with me will be via Eagle Online email. Eagle Online will be discussed in the first few days of class.

Office Location and Hours

Tuesday, Wednesday, and Thursday 11am – noon Location TBD Stafford Campus

Contact me if you would like to meet at another time to better fit your schedule. Additionally, you can find the office hours of ALL the geology faculty on my LearningWeb page

Course Location/Times

Tues & Thurs 12:30 – 3:30pm Stafford Scarcella Center room S114

**Course Semester Credit Hours (SCH)
(lecture, lab)**

Credit Hours	4.00
Lecture Hours	3.00
Laboratory Hours	3.00
External Hours	

Total Course Contact Hours
96.00

Course Length
16 weeks

Type of Instruction

Web-enhanced Lecture/Lab. This course is “web-enhanced”. EagleOnline is an internet-based course management system, which will be used to compliment the classroom course, not take the place of in-person instruction. Additional information on how to access EagleOnline and on the course resources that will be available through it will be provided in class. You are expected to check the EagleOnline site every few days to view announcements or messages from the instructor. This will also be where quizzes are hosted as well as review materials.

Course Description:

Study of the nature of the earth, including the physical processes operating on and inside the earth. Laboratory includes the study of rocks, minerals, and topographic maps. Core Curriculum course

Course Prerequisite(s)

Must be placed into college level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite). In addition you will be expected to use basic math and geometry skills.

Academic Discipline/CTE Program Learning Outcomes

1. Students will recognize scientific and quantitative methods. Students will evaluate the differences of scientific approaches and communicate these findings, analyses, and interpretations in oral and written communication.
2. Students will identify and recognize the differences in competing scientific theories.
3. Students will demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, religion, and public policies.
4. Students will demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

Course Student Learning Outcomes (SLO):

1. Define Physical Geology in terms of the Earth's materials, features, and processes that shape landforms.
2. Define the formation and position of the Earth in the Solar System.

3. Define the major features of the Oceanic and Continental Crusts.
4. Interpretation and application of topographic maps and geologic profiles.
5. Analyze, organize and contrast Minerals and Rocks in terms of physical properties, textures, and compositions.
6. Evaluate the models of Continental Drift and Plate Tectonics.

Learning Objectives

Define Physical Geology in terms of the Earth's materials, features, and processes that shape landforms.

1. Name the Geological terms used in describing Earth's materials, features, and processes that shape landforms.

Define the formation and position of the Earth in the Solar System.

1. Identify the position of the Earth in the Solar System.

Define the major features of the Oceanic and Continental Crusts.

1. Identify the major features of the Oceanic and Continental Crusts.

Interpretation and application of topographic maps and geologic profiles.

1. Read, interpret, analyze and understand topographic maps and geological profiles in terms of relief, contour intervals, and elevation.
2. Construction of topographic maps based on field data.
3. Construction of a Geological Profile of a major US landform

Analyze, organize and contrast Minerals and Rocks in terms of physical properties, textures, and compositions.

1. Construction of charts to organize and contrast mineral properties, rock textures and compositions

Evaluate the models of Continental Drift and Plate Tectonics.

1. Defend or criticize the explanation for Continental Drift.
2. Evaluate the drift of the continents from the formation of Pangaea to present day positions.
3. Justify Plate Tectonic Theory and how it relates to earthquake and volcanic hazard assessment.

SCANS and/or Core Curriculum Competencies:

Perspectives - 1. Establish broad and multiple perspectives on the individual in relation to the larger society and world in which he or she lives, and to understand the responsibilities of living in a culturally and ethnically diversified world;

Perspectives - 2. Stimulate a capacity to discuss and reflect upon individual, political, economic, and social aspects of life in order to understand ways in which to be a responsible member of society;

Perspectives - 3. Recognize the importance of maintaining health and wellness;

Perspectives - 4. Develop a capacity to use knowledge of how technology and science affect their lives;

Perspectives - 5. Develop personal values for ethical behavior;

Perspectives - 6. Develop the ability to make aesthetic judgments;

Perspectives - 7. Use logical reasoning in problem solving;

Perspectives - 8. Integrate knowledge and understand the interrelationships of the scholarly disciplines.

Class Schedule

Please review the chapter material before coming to class. Check Eagle Online for any lab handouts/worksheets you need to bring

WEEK	DATE	LECTURES, LABS & ASSESSMENTS
week 1	1/17	Introductions, Overview of Course <i>and</i> Chapter 1: The Earth System
	1/19	Chap. 1: The Earth System
week 2	1/24	Ch. 2 Plate Tectonics
	1/26	Lab 1: Mineral Properties

week 3	1/31	Chapter 3: Earth Materials: Minerals
	2/2	Lab 2: Mineral Identification
week 4	2/7	Chapter 4 Igneous Rocks
	2/9	Lab 3: Igneous rock identification
week 5	2/14	Ch 5 Sedimentation <i>and</i> part of Chap. 18: Stream transport
	2/16	Lab 4: Sedimentary Rocks and sedimentary features
week 6	2/21	Chapter 6 metamorphism and review for Exam 1
	2/23	Lab 5: Topographic Maps (exercise 9)
week 7	2/28	Exam #1 and Chapter 7 deformation
	3/1	Lab 6: Geologic Structures (exercise 10)
week 8	3/8	Ch. 12 Volcanoes
	3/10	Lab Quiz #1
		<i>SPRING BREAK March 11 – March 17</i>
week 9	3/20	Ch. 12 Volcanoes
	3/22	Lab 7: Volcano types and hazards (assign NP project)
week 10	3/27	Ch. 13 Earthquakes
	3/29	Lab 8: Volcano types and hazards (handout)
		<i>Withdrawal deadline – 4:30PM, Thurs, March 29</i>
week 11	4/3	Ch. 13 Earthquakes <i>cont.</i> and part of Ch. 14 Exploring Earth's Interior
	4/5	Lab 7: Google Earth volcanoes & plate tectonics
week 12	4/10	Chapter 8 Clocks in Rocks
	4/12	Lab Quiz #2 Lab 10: Geochronology (exercise 8)
week 13	4/17	Exam #2 and start chapter 18: Stream Transportation
	4/19	Work on national park research projects
week 14	4/24	Chapter 18 Stream Transportation and River processes
	4/26	Lab 11: Google Earth Rivers assignment
week 15	5/1	National Park Presentations
	5/3	Semester wrap-up <i>and</i> Review for Final Exam
FINALS	Thur 5/10	Final Exam 12:30pm (normal class time) Thursday, May 10 Do not miss the final exam. It is cumulative and comprehensive.

NOTE: Course Syllabus and Class Schedule subject to modification. Any updates to the syllabus and schedule will be posted on LearningWeb and Eagle Online.

Instructional Methods

Web-enhanced. EagleOnline is available at <https://hccs1.mrooms3.net/login/index.php>.

Student Assignments

Assignments in this course will be ~weekly Lab assignments. Most of these assignments will be directly from the lab book. You will usually work in pairs to complete the assignment and both of you will put your

names on it to submit. Thus, you and your partner will receive the same grade. You may work with anyone in the class and you do not need to keep the same lab partner each week. I encourage you to work with different people. Some of the lab assignments need materials available only in the lab classroom and you may not be able to finish them after the lab period. For this reason it is important that you make the most of the hours you have in lab so you can finish the assignments for full possible credit.

Student Assessment(s)

Quizzes: There will be quizzes throughout the semester. The quizzes will be administered on-line via the class EagleOnline site. The quizzes will be available for a certain number of days. Once the deadline is past you will not be able to take the quiz. See the grading criteria below for the weight of the quizzes in your final score. I may also choose to give unannounced in-class quizzes, so always be prepared.

Examinations: Lecture exams will consist of a variety of question types including multiple choice, fill-in, short answer, image labeling and sketching. Prior to the exam I will let you know about any materials you will need (ie: calculator, colored pencils, rulers, etc). Exam dates are indicated on the course calendar listed earlier in this syllabus.

Lab exams will also be given covering some of the skills practiced in lab exercises. Lab tests will generally include "hands on" testing such as fossil identification or map interpretation. You will be expected to memorize the Geologic Time Scale for the first lab test.

See the grading criteria below for the weight of the semester's exams in your final score.

Instructor's Requirements

Lab Requirements: Lab attendance is mandatory. Lab exercises and assignments are designed to complement the lecture and give you hands-on experience with the concepts covered in lecture.

Thinking through and understanding lab assignments are a big step toward learning the material.

Collaborative group work is emphasized. You can learn from your classmates and them from you.

**Each week you should check EagleOnline for any lab handouts or worksheets that you will need.

These may need to be printed and brought as a hard copy. COPIES WILL NOT BE PROVIDED BY THE INSTRUCTOR. PRINT BEFORE COMING TO CLASS.

Missed Examinations: As a rule, **no make-up** exams will be given and a grade of 0 will be earned if an exam is missed. Should an exam be missed due to an exceptional situation beyond the student's control, the situation will be assessed on a case-by-case basis but the instructor should be notified of the situation as soon as possible. Ideally, students should contact the instructor prior to missing a scheduled examination in-person or by e-mail.

Cell Phone Policy: Cell phones are important to many of us for communication. However, in the classroom they are distractions. Your job in class is to learn and participate as much as possible. Cell phones and pagers and similar devices should be turned to silent (as in NO NOISE AT ALL) while you are in class. If you need to take/make an emergency call you may talk in the hallway. If you are texting or otherwise fiddling with your device during class you will be asked to put it away. If your phone habits become a nuisance to the classroom you will be asked to leave.

Tardiness: Arriving to class late is disruptive. If this happens once or twice it may be overlooked if you come in quietly. But if you are frequently late to class it is a problem and you can expect me to start a conversation with you about how to solve the problem. Additional tardies may necessitate counselor involvement.

Program/Discipline Requirements:

Course Goals: The purpose of this course is to enable students to use fact and observation to make interpretations about geologic processes operating today and in the past. Key questions to be addressed: What are the major elements of plate tectonic theory? How do Earth systems modify the landscape? What impact do geologic processes have on our local environment? Global environment? Students will learn to interpret data from a variety of resources including topographic maps, rock and mineral collections, personal observation, and the World Wide Web. The fundamental assumption behind this course is that entry level students who may have little previous exposure to the sciences can learn

interpret geologic data from a scientific point of view.

Course Content: What you will discover is that Geology is an eclectic science and in this course you will be exposed to chemistry, biology, and physics. And, yes, even some mathematics. A basic understanding of principles from these fields underlies many of the concepts that you will learn in this course. We will review, for example, the basics of atomic structure and chemical bonding as an introduction to Minerals.

HCC Grading Scale

A = 100- 90	4 points per semester hour
B = 89 - 80:	3 points per semester hour
C = 79 - 70:	2 points per semester hour
D = 69 - 60:	1 point per semester hour
59 and below = F	0 points per semester hour
IP (In Progress)	0 points per semester hour
W(Withdrawn)	0 points per semester hour
I (Incomplete)	0 points per semester hour
AUD (Audit)	0 points per semester hour

IP (In Progress) is given only in certain developmental courses. The student must re-enroll to receive credit. COM (Completed) is given in non-credit and continuing education courses. To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "IP," "COM" and "I" do not affect GPA.

If you cease attending class and do not complete the withdraw process you will receive your earned grade at the end of the semester – this will likely be an F.

Instructor Grading Criteria

Grades for this course are earned based on the divisions listed below. Some consideration is given, when assessing borderline grades, to those students who have demonstrated steady progress and who have actively contributed to class sessions during the semester. (**Note: Students are responsible to keep up-to-date on their cumulative grade total.**)

Quizzes (5-7 during semester)	=	5% of final grade
Lecture Exam 1	=	10% of final grade
Lecture Exam 2	=	15% of final grade
Lab Quiz #1	=	5% of final grade
Lab Exam #2	=	10% of final grade
Final Exam (includes lab material)	=	25% of final grade
Lab Assignments (~10)	=	30% of final grade
Total	=	100%

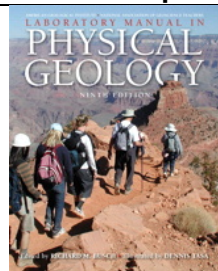
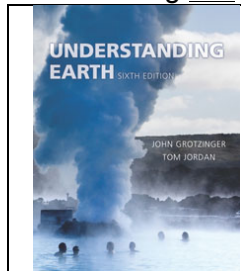
Final letter grade will be assigned according to the following scale:

A = 89.5 – 100%, B = 79.5 – 89.4%,
C = 69.5 – 79.5%, D = 59.5 – 69.5%, F = ≤ 59.5%

Extra Credit: There will be a few extra credit opportunities during the semester. These are good opportunities to add more points to your total score. Opportunities and value to be announced. Stay tuned!

Instructional Materials

The following two texts are **required**.



Textbook: *Understanding Earth, 6th ed.*, by Grotzinger & Jordan; W.H. Freeman and Co., 2010 (ISBN 9781429219518)

Textbook website: <http://bcs.whfreeman.com/understandingearth6e/>

Lab book: *Laboratory Manual in Physical Geology, 9th ed.*, edited by Busch, Prentice Hall, 2012 (ISBN 13-9780321689573).

Lab Book website: http://wps.prenhall.com/esm_busch_labmanual_9/

HCC Policy Statement:

Attendance: Students are expected to attend classes (lecture & lab) regularly and to be on time. Class attendance/tardiness will be recorded. Tardiness is rude and disruptive. If you are late to class and miss a quiz you will not be permitted to take the quiz. *A student may be dropped from a course for excessive*

absences after the student has accumulated absences in excess of 12.5% of the hours of instruction (including lecture & laboratory time). More than four absences make the student subject to **administrative** withdrawal. Students are responsible for material covered in lecture and labs during their absences. A student's attendance is taken into consideration when deciding borderline course grades. If you miss class it is your responsibility to find out what assignments, handouts or other class material you missed either by asking the professor or your classmates. Collect classmate contact info on the last page of the syllabus.

Withdrawal Policy: The withdrawal deadline is **4:30PM, Thursday, March 29**. It is the student's responsibility to withdraw from class. Failure of a student to officially withdraw from class and simply not attending for the remainder of the semester, may result in the student receiving a grade of F for the course. If you are considering course withdrawal because you are not earning passing grades, confer with your instructor/counselor as early as possible about your study habits, test-taking skills, attendance, and opportunities for tutoring or other assistance that might be available. After the first week of class in a regular term, students must complete a withdrawal form and meet with their instructor **or** a counselor to complete the withdrawal process.

Students who repeat a course three or more times may soon face significant tuition/fee increases at HCC and other Texas public colleges and universities. If you are considering course withdrawal because you are not earning passing grades, confer with your instructor/counselor as early as possible about your study habits, reading and writing homework, test-taking skills, attendance, course participation, and opportunities for tutoring or other assistance that might be available.

Student with Disabilities (ADA): HCCS is committed to compliance with the American with Disabilities Act and the Rehabilitation Act of 1973 (section 504)

"Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Services Office at the respective college at the beginning of each semester. Faculty is authorized to provide only the accommodations requested by the Disability Support Services Office. For questions, contact Donna Price at 713.718.5165 or the Disability Counselor at your college. To visit the ADA Web site, log on to www.hccs.edu, click Future Students, scroll down the page and click on the words Disability Information."

If you have any special needs or disabilities, which may affect your ability to succeed in college classes or participate in college programs/activities, please contact the office of disability support services at the college. Upon consultation and documentation, you will be provided with reasonable accommodations and/or modifications. Please contact the DSS office as soon as you begin the term. Dr. Becky A. Hauri at 713 718 7909. **Also visit the ADA web site at: <http://www.hccs.edu/hccs/future-students/disability-services>.**

Policy on Recording Devices: Use of recording devices (camera phones, cameras, audio/tape recorders, video recorders, and any other electronic device that is capable of recording the human voice or image) is prohibited in classrooms, laboratories, faculty offices, and other locations where instruction, tutoring, or testing occurs. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations.

HCC Sexual Harassment Policy: HCC shall provide an educational, employment, and business environment free of sexual harassment. Sexual harassment is a form of sex discrimination that is not tolerated at HCC. Any student who feels that he or she is the victim of sexual harassment has the right to seek redress of the grievance. HCC provides procedures for reviewing and resolving such complaints through its Grievance Policy. Substantiated accusations may result in disciplinary action against the offender, up to and including termination of the employee or suspension of the student. In addition,

complainants who make accusations of sexual harassment in bad faith may be subject to equivalent disciplinary action.

Academic Honesty: "Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Disciplinary proceedings may be initiated by the college system against a student accused of scholastic dishonesty. Penalties can include a grade of "0" or "F" on the particular assignment, failure in the course, academic probation, or even dismissal from the college. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion." **Cheating** includes looking at or copying from another student's exam, orally communicating or receiving answers during an exam, having another person take an exam or complete a project or assignment, using unauthorized notes, texts, or other materials for an exam, and obtaining or distributing an unauthorized copy of an exam or any part of an exam. **Plagiarism** means passing off as his/her own the ideas or writings of another (that is, without giving proper credit by documenting sources). Plagiarism includes submitting a paper, report or project that someone else has prepared, in whole or in part. **Collusion** is inappropriately collaborating on assignments designed to be completed independently. These definitions are not exhaustive. When there is clear evidence of cheating, plagiarism, collusion or misrepresentation, a faculty member will take disciplinary action including but not limited to: requiring the student to retake or resubmit an exam or assignment, assigning a grade of zero or "F" for an exam or an assignment; or assigning a grade of "F" for the course. Additional sanctions, including being withdrawn from the course/program or expelled from school, may be imposed on a student who violates the standards of academic integrity. See the [Student Handbook](#) for additional details.

Access Student Services Policies on their Web site:

<http://hccs.edu/student-rights>

And also check out the HCC Student Handbook: <http://www.hccs.edu/hccs/current-students/student-handbook>

EGLS3 -- Evaluation for Greater Learning Student Survey System

At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time near the end of the term, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and department chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term.