



HOUSTON COMMUNITY COLLEGE SOUTHWEST
SYLLABUS FOR GEOL 1403 – PHYSICAL GEOLOGY – DE
Fall 2014
Class Number 31801

Instructor contact information (phone number and email address)

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Most of your contact with me will be via Eagle Online's "quickmail" feature. This tool will automatically fill in our course information in the subject line of your message. Also, the reply email address will only be your ____@student.hccs.edu address. For the sake of security I won't reply to e-mails that are not from your ____@student.hccs.edu address.

Office Location and Hours

Tuesday & Thursday 2pm-3:30pm. Stafford Scarcella Center room S114 (geology room)

If these times don't work for you we can certainly schedule something that works! Just contact me to set up a different meeting time.

Course Location/Times

On-line course. Weekly lab session Friday 8am – 11 am Stafford Scarcella Center rm 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

On-line Distance Education. Lecture/Lab.

Course Description:

Introduction to the study of the materials and processes that have modified and shaped the surface and interior of Earth over time. These processes are described by theories based on experimental data and geologic data gathered from field observations. Laboratory activities will cover methods used to collect and analyze earth science data. Core Curriculum course

Course Prerequisite(s)

Must be placed into college level reading (or take GUST 0342 as a co-requisite) or higher and be placed into college-level writing (or take ENGL 0310/0349 or INRW 0420 as a co-requisite). Also, you need to be placed into MATH 0312 (intermediate Algebra) or higher

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. 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.

Academic Discipline/CTE Program Learning Outcomes

1. Students will recognize scientific and quantitative methods.
2. Students will evaluate the differences of scientific approaches and communicate these findings, analyses, and interpretations in oral and written communication.
3. Students will identify and recognize the differences in competing scientific theories.
4. Students will demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, religion, and public policies.
5. 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. Describe how the scientific method has led to our current understanding of Earth's structure and processes.
2. Interpret the origin and distribution of minerals, rocks and geologic resources.
3. Describe the theory of plate tectonics and its relationship to the formation and distribution of Earth's crustal features.
4. Quantify the rates of physical and chemical processes acting on Earth and how these processes fit into the context of geologic time.
5. Communicate how surface processes are driven by interactions among Earth's systems (e.g., the geosphere, hydrosphere, biosphere, and atmosphere).
6. Identify and describe the internal structure and dynamics of Earth.
7. Describe the interaction of humans with Earth (e.g., resource development or hazard assessment).
8. (Lab 1.) Classify rocks and minerals based on chemical composition, physical properties, and origin.
9. (Lab 2.) Apply knowledge of topographic maps to quantify geometrical aspects of topography.
10. (Lab 3.) Identify landforms on maps, diagrams, and/or photographs and explain the processes that created them.
11. (Lab 4.) Differentiate the types of plate boundaries and their associated features on maps and profiles and explain the processes that occur at each type of boundary.
12. (Lab 5.) Identify basic structural features on maps, block diagrams and cross sections and infer how they were created.
13. (Lab 6.) Demonstrate the collection, analysis, and reporting of data.

Learning Objectives

- 1.1 Defend or criticize the explanation for Continental Drift.
- 3.1 Identify the major features of the Oceanic and Continental Crusts.
- 4.1 Evaluate the drift of the continents from the formation of Pangaea to present day positions.
- 5.1 Name the Geological terms used in describing Earth's materials, features, and processes that shape landforms.
- 6.1
- 7.1 Justify Plate Tectonic Theory and how it relates to earthquake and volcanic hazard assessment.
- Lab 1.1 Construction of charts to organize and contrast mineral properties, rock textures and compositions
- Lab 2.1 Read, interpret, analyze and understand topographic maps and geological profiles in terms of relief, contour intervals, and elevation.
- Lab 2.2 Construction of topographic maps based on field data.
- Lab 3.1 Construction of a Geological Profile of a major US landform

Core Curriculum Objectives:

This course is in the Life and Physical Science Core Curriculum category and meets the objectives of Critical Thinking, Communication Skills, Empirical & Quantitative, and Teamwork.

Class Schedule - As of 09/23/14

Check Eagle Online for any lab handouts/worksheets you need to bring

WEEK	DATE	LECTURES, LABS & ASSESSMENTS
week 1	8/25–8/31	Introductions, Overview of Course <i>and</i> Chap. 1: Understanding Earth
	8/29	Lab 1: Review of metric system, geography, major geographic features
week 2	9/1–9/7	Ch. 2 Plate Tectonics
	9/5	Lab 2: Mineral Properties
week 3	9/8–9/14	Chapter 3: Minerals – the building blocks of rocks
	9/12	Lab 3: Mineral Identification
week 4	9/15–9/21	Chapter 4: Igneous Rocks and Plutons
	9/19	Lab 4: Igneous rock identification
week 5	9/22–9/28	Chap 6: Weathering <i>and</i> Chap 7: Sediment and Sedimentary Rocks
	9/26	Lab 5: Sedimentary Rock identification and sedimentary features
week 6	9/29–10/5	Prepare for Exam #1, Chapter 8: Metamorphism and Metamorphic Rocks
	10/3	EXAM #1 (chap 1, 2, 3, 4, 6, 7) & start Lab 6: Topographic Maps (exercise 9)
week 7	10/6–10/12	Chap. 10: Deformation, mountain building, & Earth's crust
	10/10	Finish Lab 6 <i>and review rocks/minerals</i>
week 8	10/13–10/19	Lab #7 Geologic structures (exercise 10)
	10/17	Lab Quiz #1: Rocks and Minerals (assign NP project)
week 9	10/20–10/26	Chapter 5: Volcanoes and Volcanism
	10/24	Lab 8: Volcano types and hazards
week 10	10/27–11/2	Chapter 9: Earthquakes and Earth's Interior Quiz: Virtual seismologist
	10/31	Lab 9 = seismology
		Withdrawal deadline – 4:30PM, Friday, October 31
week 11	11/3–11/9	Chapter 16: Oceans, Shorelines, and Shoreline Processes
	11/7	Lab 10: Coastal features and Processes
week 12	11/10–11/16	Prepare for Exam #2 & Chapter 17: Geologic Time: Concepts and Principles
	11/14	EXAM #2 (chap 8, 10, 5, 9, 16) Lab 11: Geologic Time assignment
week 13	11/17–11/23	Chapter 12: Running Water – Streams and Rivers
	11/21	Lab 12: River assignment
week 14	11/24–11/30	Work on national park research projects
	11/28	THANKSGIVING BREAK – NO LAB
week 15	*12/1–12/6*	Finish National Park research, finalize presentations & review for final exam
	12/5	National Park Presentations
FINALS	12/12	Final Exam & lab quiz #2 8am Fri Dec 12. 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

On-line. EagleOnline is available at <https://eo2.hccs.edu/login/index.php>. EagleOnline is an internet-based course management system which will be used to administer all of the “lecture” portion of the course including quizzes. You are expected to log-in to the EagleOnline site every few days to keep up with course material, print anything needed for lab and receive announcements. We have weekly laboratory meetings on Friday morning.

Student Assignments

Assignments in this course will be ~weekly Lab assignments. Most of these assignments will be directly from the lab book. Some assignments will be completed individually, some will be done by pairs of students. 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 at home 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 maximum possible credit. The SLOs covered by lab assignments are #8 – 13 in addition to SLO 4.

National Park Research – you can see on the calendar that the last meeting of class will be a day of presentations. You and one or 2 classmates will spend the second half of the semester gathering geologic information on a National Park of your choosing. This project will be assigned and more details given in Week 8.

Student Assessment(s)

Weekly Quizzes and Exams will assess Student Learning Outcomes 1 – 7

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 3 – 5 days. *Once the deadline has past you will not be able to take the quiz.* Most quizzes will allow more than one attempt, though you won't see the same questions for the multiple attempts. The highest score of your attempts will be the one recorded. You can review your quizzes after completing them to use as study material. See the grading criteria below for the weight of the quizzes in your final score.

The first quiz will cover material from the syllabus – passing this quiz will allow you into the rest of the course material.

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: Scantron, calculator, colored pencils, rulers, etc). Exam dates are indicated on the course calendar listed earlier in this syllabus. Examinations for this DE course will be given in person during lab meetings. Exam #1 covers material from chapters 1, 2, 3, 4, 6, 7. Exam #2 covers material from chapters 8, 10, 5, 9, 16 (as well as chap. 2).

Lab quizzes will also be given covering some of the skills practiced in lab exercises. The first lab quiz will be rock and mineral identification. The 2nd lab quiz will cover material post-lab #5 and will not have rock samples.

The final exam will be Friday, Dec 12 at our regular meeting time.

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. Ideally, students should contact the instructor prior to missing a scheduled examination in-person or by e-mail. I can prepare an exam early if you know you will miss class that day. But I need significant advanced notice. 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. There are no make-up quizzes.

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

REVIEW SESSION: A review session will be scheduled before the final exam. Date to be determined.

Instructor's Requirements

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

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 smart phones and pagers and similar devices should be turned to silent (as in NO NOISE AT ALL) while you are in lab. If you need to take/make an emergency call you may talk in the hallway or make use of the comfy chairs in the common areas. 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: Lab starts at 8am. Arriving to lab 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.

Technology Requirements: As covered in the Distance Education Orientation material, you MUST have reliable, regular access to an internet-connected computer. This is an on-line course. You can check your software needs via the support pages of Eagle Online. Make sure your "plug-ins" and "add-ons" are up to date. We all know that sometimes technology fails us. If your personal computer goes on the fritz or your internet connection is disconnected for a few days it is YOUR responsibility to find a computer somewhere else to complete quizzes and review weekly material. A neighbor, the library, a campus computer lab, a friend... make sure you have back-up plans for where to log-in to our class.

Program/Discipline 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 is a big step toward learning the material. Collaborative group work is emphasized. You can learn from your classmates and them from you. All HCC policies regarding attendance, withdrawal, academic honesty, students with disabilities, grading, and student rights will be followed in this course. Refer to syllabus section titled "Instructor's Requirements", "HCC Policy Statements", and "Grading" for more details as well as the Student Handbook <http://www.hccs.edu/district/students/student-handbook/>

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.

FINAL GRADE OF FX: Students who stop attending class and do not withdraw themselves prior to the withdrawal deadline may either be dropped by their professor for excessive absences or be assigned the final grade of "FX" at the end of the semester. Students who stop attending classes will receive a grade of "FX", compared to an earned grade of "F" which is due to poor performance. Logging into a DE course without active participation is seen as non-attending. Please note that HCC will not disperse financial aid funding for students who have never attended class.

Students who receive financial aid but fail to attend class will be reported to the Department of Education and may have to pay back their aid. A grade of "FX" is treated exactly the same as a grade of "F" in terms of GPA, probation, suspension, and satisfactory academic progress.

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.

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 (best 10)	=	10% of final grade
Lecture Exam 1	=	15% of final grade
Lecture Exam 2	=	15% of final grade
Lab Quiz #1	=	5% of final grade
Lab Quiz #2	=	5% of final grade
Final Exam (includes lab material)	=	20% of final grade
Lab Assignments	=	25% of final grade
<u>NP Research Project</u>	=	<u>5% of final grade</u>
Total	=	100%

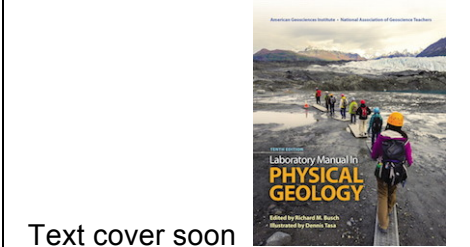
Final letter grade will be assigned according to the following scale:

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.

	<p>Textbook: <i>The Changing Earth, 6th ed.</i>, by Monroe & Wicander; Cengage, 2012 (ISBN 9781305046221) Textbook website: click here This is a custom printed book chap 1- 17. Loose-leaf 3-hole punched wrapped in plastic.</p> <p>Lab book: <i>Laboratory Manual in Physical Geology, 10th ed.</i>, edited by Busch, Prentice Hall, 2014 (ISBN 13-9780321944511). Lab Book website:</p>
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HCC Policy Statement – Read the DE Student Handbook:

The Distance Education Student Handbook contains policies and procedures unique to the DE student. Students should have reviewed the handbook as part of the mandatory orientation. It is the student's responsibility to be familiar with the handbook's contents. The handbook contains valuable information, answers, and resources, such as DE contacts, policies and procedures (how to drop, attendance requirements, etc.), student services (ADA, financial aid, degree planning, etc.), course information, testing procedures, technical support, and academic calendars. Refer to the [DE Student Handbook](#)

Student with Disabilities (ADA):

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>.

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.

Attendance: Students are expected to attend/participate regularly in class. Refer to the attendance policy in the DE Student Handbook. DE students who do not log into and actively participate in their class before the Official Day of Record (Sept 8) may be AUTOMATICALLY dropped for non-attendance. Completing the DE online orientation does not count as attendance. Participation requirements will be listed in the first "topic" of the class page. Lab attendance/tardiness will also be recorded.

Students who stop attending class and do not withdraw themselves prior to the withdrawal deadline may either be dropped by their professor for excessive absences or be assigned the final grade of "FX" at the end of the semester.

Withdrawal Policy: The withdrawal deadline is **4:30PM, Friday, October 31**. It is the student's responsibility to withdraw from class. I will not withdraw you from the class unless you specifically ask me to do so. You are able and capable of adding the course to your schedule, so you are able and capable of removing it when you decide to drop. If you do not drop and simply stop participating without withdrawing you WILL receive a grade at the end of the semester and it will likely be an F.

Religious Holidays: If you observe a religious holiday and miss class, you must notify your instructor in writing two weeks in advance to arrange to take a test or make up an assignment. A religious holiday is "a holy day observed by a specific religion and the place of worship is exempt from property taxation under Section 11.20 of the Tax Code."

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/district/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.