

Phil Garwood
 FALL 2016
 GEL111 D03, 05, 07,DE01
 Office: S-406 Office Hours M-F 9-10
 M,W,F 2-3p.m Tu. 2-4p.m.
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pgarwood@cfcc.edu

CFCC General Education Competencies will incorporate all or some of the following:

✓	Computer Skills	✓	Quantitative Skills
✓	Critical Thinking	✓	Written Communication
✓	Global Awareness	✓	Understanding Scientific Concepts & Applications
✓	Oral Communication		

TEXTBOOK: Earth: an Introduction To Physical Geology 12th. Ed. By Tarbuck, Lutgens, & Tasa

LAB MANUAL: Laboratory Manual in Physical Geology by Richard Busch

COURSE DESCRIPTION: This course provides a comprehensive study of Physical Geology, offering a wide range of topics concerning the physical Earth. Metric measure, map studies, the solid Earth, the hydrosphere, the atmosphere, and the cryosphere will be many of the sections discussed, including man's role in the interaction of these Earth spheres. Upon completion, students will be able to demonstrate an in-depth understanding of geologic principles and their interrelationships. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. This course meets the SACS physical science requirement for AGE, AA, DIP, or CER programs. **This is a Universal Education Transfer Component (UGETC) course**

CLASS HOURS PER WEEK: 16-4
 HOURS/DAY-LAB & LECTURE

SEMESTER HOURS CREDIT: 4 credit hours

PREREQUISITES: None.

COURSE OBJECTIVES: GEL 111 is designed to cover the majority of topics in the textbook. Upon completion students should be able to:

- List, classify, and describe the major terrestrial surface processes and materials (rocks, minerals, soils)
- Compare and contrast Earth's major surface features & discuss how they evolved and changed through time
- Evaluate the different geologic processes and how they shape landforms and landscapes
- Demonstrate how geologists study present day systems to reconstruct ancient Earth environments

Measurable Student Learning Outcomes (based on Critical Thinking Goals):

- Discuss and explain the scientific method as it applies to geology.
- Convert and calculate values within the metric system.
- Describe and explain the Big Bang Theory and formation of the solar system, Earth, and Moon.
- Discuss the development of Plate Tectonic Theory from the Continental Drift Hypothesis and explain the evidence supporting the changes.
- Discuss the classification system of minerals, molecular bonding, and mineral properties.
- Explore the three types of rocks and how each type forms.
- Explain the formation of volcanoes, faults, mountains, and other geologic structures by tectonic forces.
- Diagram, reconstruct, and evaluate stratigraphic sequences and summarize their formation.
- Recall absolute and relative age dating techniques.
- Describe and review river, glacial, and arid environmental processes and how they shape our planet.
- Describe the principle of uniformitarianism.
- Demonstrate how each mineral has a definite chemical composition and atomic structure.
- Illustrate the basic processes of rock formation and the relationships between the three rock types.
- Compare and evaluate different approaches to estimating Earth's age.
- Categorize and analyze the types of plate boundaries and their respective motions.
- Judge and critique the evidence for global climate change.
- Identify the factors that contribute to geologic classification systems.

GRADING SCALE:

(92-100)	A = 4.00
(91-84)	B = 3.00
(76-83)	C = 2.00
(68-75)	D = 1.00
(0-67)	F = 0.00

WP = (not
computed
in grade
point
average)
WF =
(computed
as an "F")
I =
Incomplete
(paperwork
required)

There will be no individual extra credit given in this class.

COURSE REQUIREMENTS:

There will be four off campus field trips during the semester. Also each student will be required to write a short term-paper. Topics will be discussed during the first class. Two or three unannounced pop-quizes will occur during the semester. There will be a mid-term and a final exam. Students are advised to keep a neat, comprehensive note book.

TESTING: Mid-term exam is worth 15% of final grade.

Final exam is worth 20%

Lab work is worth 40%.

Field work is worth 15%.

Term paper is worth 5%.

Class grade is worth 5%

THERE ARE NO MAKE UP TESTS, EXAMS or FIELD TRIPS UNLESS ARRANGED PREVIOUSLY!

B. **PAPER/PROJECTS:** Each student is responsible for their own term paper and field reports unless a group effort is required. The Sutton Lake trip will be done as a group project. Students will do the write up for this lab while in lab-class.

C. **ATTENDANCE & PARTICIPATION:** According to CFCC policy, a student must attend 80% of the total scheduled class hours in order to receive credit for the course. Since Gel 111 is an 80 hour course, if you miss more than 16 hours you will receive an F. These hours include both lecture and lab hours.

Attendance will be taken at the beginning of every lecture and lab. Failure to acknowledge your presence will result in an absence. Three lates/tardies are equal to one missed hour. Under no circumstances can you state attendance for another student.

If a student leaves at any time and fails to come back in a timely fashion, then they will be subject to the attendance policy stated. If outside schedules, family issues, health issues prevent you from attending class on a regular basis, a withdrawal is highly recommended.

D. **LAB SAFETY: OSHA REGULATIONS**

-CLOSED TOED SHOES MUST BE WORN DURING ALL LABS

- SAFETY GOOGLES MUST BE WORN WHEN USING FLAMES, HEAT, ACIDS, CHEMICALS, AND POSSIBLE PROJECTILES.

MAKE-UP POLICY: There will be no make-up tests or labs. The mid-term and final exams may not be made up or retaken.

WITHDRAWAL POLICY: You are responsibility for noting the deadlines for a course withdrawal. It is not the instructors' job to turn in forms to the Registrars' office. Please familiarize yourself with the criteria and deadline dates in the CFCC CATALOG and STUDENT HANDBOOK.

COURSE STRUCTURE/SYLLABUS: - The following topics will be discussed during this semester (labs will parallel these topics-unless advised during class discussion):

I: THE METRIC SYSTEM and SCIENTIFIC NOTATION;

II: THE BIG BANG THEORY and THE CREATION OF THE UNIVERSE,THE MILKY WAY, OUR SOLAR SYSTEM, and THE EARTH/MOON.

III: THE STRUCTURE OF THE EARTH AND PLATE TECTONICS;

IV: EARTHQUAKES AND VOLCANOES;

V: MINERALS;

VI: IGNEOUS ROCKS;

VII: SEDIMENTARY ROCKS;

VIII: METAMORPHIC ROCKS;

IX: THE GEOLOGIC TIME SCALE and RELATIVE AND ABSOLUTE DATING TECHNIQUES;

X: THE EARTH'S WATER SUPPLY INCLUDING OCEANS, LAKES AND RIVERS;

XI: GLACIATION-CONTINENTAL AND ALPINE.

THIS COURSE EMPHASIZES THE FOLLOWING GENERAL EDUCATION COMPETENCY:

SCIENTIFIC REASONING: Students engage in scientific reasoning when they use fundamental scientific concepts and theories to analyze problems, observations, and/or experiments in the life and physical sciences. Students demonstrate scientific reasoning when they:

- Apply appropriate scientific concepts, theories, and language to problems, observations, or experiments
- Utilize scientific data to analyze problems, observations, or experiments
- Apply scientific observations, calculations, and/or measurements to problems or experiments
- Articulate conclusions about problems, observations, or experiments using appropriate scientific concepts and data

THIS COURSE EMPHASIZES THE FOLLOWING GENERAL EDUCATION COMPETENCY:

CRITICAL THINKING: Critical thinking is the deliberate process of questioning, evaluating, and responding to problems, scenarios, and arguments in order to reach sound solutions, decisions, and positions. Students demonstrate critical thinking when they:

- Ask a pertinent question that clarifies and focus a problem, scenario, or argument
- Evaluate the quantity, quality, and usefulness of information
- Articulate a sound solution, decision, or position based on appropriate standards of reasoning
- Monitor and reflect upon the quality and fairness of their reasoning

Accommodation of Special Needs Based on Disability: Any student who requests classroom accommodations because of a disability must present documentation to verify his/her disability. This documentation must be furnished to the Disabilities Service Coordinator and this should be provided prior to requesting accommodation by the instructor. On a confidential basis, the student, disabilities services and the instructor will determine the appropriate accommodations following documentation. Accommodations will be provided in a manner that is consistent with the objectives, outcomes, and academic standards of the course. Absences must not exceed class attendance policy.

Academic Honesty: Any dishonest behavior, unethical intent or action as specified by CFCC will result in an "F" for the course. Again, please refer to the section on "Cheating" in the CFCC catalog and handbook.

Plagiarism is, using as your own, the words or ideas of others, whether written or oral. You must quote or paraphrase accurately and properly the source of the material. Plagiarism includes word for word copying without indicating that you are quoting, inaccurate quoting and paraphrasing, and incomplete or missing documentation. You may not purchase a paper and then use it as your own creation. **Any** misrepresentation of the source of in your paper will constitute a form of plagiarism. Intentional or unintentional, plagiarism is not acceptable and will result in a grade of "0" for the assignment and/or the course, at the instructors discretion. Should students require a hard copy of this syllabus, please ask your instructor.

MyCFCC is your student web portal - there you can access your class websites, email, and WebAdvisor (official academic info such as grades, transcripts, schedules, etc). Your official CFCC-provided email account is to be used for all e-mail correspondence with your instructors and CFCC staff. Some information from CFCC will ONLY be emailed to this address, and not sent through postal mail, so it is very important that you check this account. To access this account, visit the myCFCC portal - there is a link to the portal near the top of the CFCC.edu website. Login and click the "Email" link. Your username is part of your email address: user@mail.cfcc.edu. (Note if you've had a CFCC email address in the past, this one differs because we've changed 'email' to 'mail' in the address.) This email account is provided to you as long as you are enrolled in classes (you can take the summer off), and may be used for personal email as well as academic email. The class websites linked from the portal is automatically created for every class - it is up to the instructors to decide whether and how to use them. Even if they are not used, you can send an email to your instructor by clicking the "Send Email" link on your class homepage.

STUDENT HELPDESK: Location: L-114
Phone: (910) 362-7778
Email: StudentHelp@cfcc.edu
Hours: Monday-Thursday 8a.m.-8p.m.
Friday 8a.m.-5p.m.
Location: NA 208
Hours: 8.00a.m-8.00p.m
Phone: 362-7778
EMAIL: StudentHelp@cfcc.edu

Religious Observances: Students will be allowed two days of excused absence each academic year for religious observances required by the faith of the student. These excused absences will be included in the twenty (20%) percent of allowable clock hour absences. Students are required to provide written notice of the request for an excused absence by completing the Religious Observance Absence form available in Student Development. The completed form must be submitted to the Vice President of Student Development or his/her designee a minimum of ten (10) school days prior to the religious observance. The Vice President of Student Development or his/her designee will notify the instructor within three (3) school days of receiving the request. Students will be given the opportunity to make up any tests or other work missed due to the excused absence and should work with their instructors in advance of the excused absence to delineate how to make up the missed coursework (N.C.G.S. 115D-5).

Contingency Plan: If there is an emergency and the instructor or an appropriate substitute does not meet with the class, wait fifteen minutes. Then, everyone in the class should sign a roll sheet and designate someone to take it to the Department Chair or Secretary.

Tobacco use is prohibited on all CFCC property. The first offense is a warning and the second offense may result in disciplinary action.

******The instructor reserves the right, acting within the policies and procedures of Cape Fear Community College, to make changes, adjustments, additions and deletions in course content, first day handout, or instructional technique, without notice or obligations.***