



21 Fall Semester

Earth Science

GEL109.I50

Number of Credits: 4

Days Class Meets: Online

Meeting Times: Online Tuesday 7:00 P.M.

Location/Venue: Big Blue Button

Instructor: Dr. Steven Albee-Scott

Contact Phone: 796-517-8568

Contact Email: albeescsteven@jccmi.edu (Use this for official class business)

Online Office Hours: M W 1:00-5:00

Course Description

This course serves as a foundation for the Earth sciences and Earth science majors. Emphasis is placed on laboratory experience and class discussions to reinforce scientific principles. Earth science case studies are covered in detail. In laboratory, the students will learn how to apply basic scientific principles through active learning and application.

Prerequisite(s)

No prereqs

Course Goals

Students will develop an earth science skill-set to understand the four strands of scientific investigation: content, process, communication, and the nature of science. Students will use the critical thinking to evaluate scientific information, data, and current earth science issues. The foundation for earth science will be constructed using the four strands as they pertain to the atmosphere, biosphere, lithosphere, and hydrosphere. The fundamental concepts in earth science, like cycles, geological timeline, geology, geochemistry, geophysics, and biosphere interactions, are presented in context with current issues. The students will compare and contrast the content and process through communications with their peers and

the instructor ultimately understanding the nature of science. This course is designed for people interested in earth issues using their computational skills and includes a strong laboratory component.

Upon completing this course students will retain a skill-set derived from critical thinking and environmental scientific methodology. This skill-set can be used in science classes following earth science, and in problem solving needs throughout their lives. Although this course is an introductory class, introductory does not translate into easy. This course does not require background knowledge in earth science. It will require effort to build the scientific foundation and the philosophical underpinnings of critical thinking and scientific thought. Students will have to spend time studying the material to succeed. To receive a 4.0 in this course, you should expect to study 16 hours a week (4 credit hours x 4.0 grade = 16 hours of study), and depending on your study skill-set, this time commitment may increase or decrease. You are responsible for the resulting grade that you shall receive.

Course Objectives

The course goals and objectives incorporate specific General Education Outcomes (GEOs) established by the JC Board of Trustees, administration, and faculty. These goals are in concert with four-year colleges and universities and reflect input from the professional communities we serve. GEOs guarantee students achieve goals necessary for graduation credit, transferability, and professional skills needed in many certification programs. The GEOs and course objectives addressed in this class include the following:

Think in systems.

Read and interpret scientific graphs and tables.

Communicate scientific information.

Connect the nature of science to content, process, and communication.

Link the scientific method to peer review and self-correcting mechanisms.

Articulate the big ideas in scientific discourse.

Integrate information of natural processes that govern the natural world.

Critically evaluate data drawn from natural phenomena.

Establish a scientific baseline.

Understand the connection between physical and chemical cycles within Earth's domains.

Interpret results of earth science studies.

Connect the mechanisms of geology, physics, chemistry, and biology to emergent properties.

Understand sustainability as it relates to the earth sciences and evolution.

Articulate the factors affecting global climate change and human impact on the environment.

Textbook

- Text: The Changing Earth: Exploring Geology and Evolution, 7th Ed. Monroe and Wicander; ISBN: 9781285733418 (Available on JetNet)
- Lab Manual: Handouts: JetNet.

Digital Format: This text is available in a digital format to rent or purchase through the JC Bookstore. Please see the links posted on your class JetNet site.

Open Educational Resources (OER): OERs are teaching, learning, and research materials that are either (a) in the public domain or (b) licensed in a manner that provides everyone with free permission to:

- Retain – make, own, and control a copy of the resource
- Reuse – use your original, revised, or remixed copy of the resource publicly
- Revise – edit, adapt, and modify your copy of the resource
- Remix – combine your original or revised copy of the resource with other existing material to create something new
- Redistribute – share copies of your original, revised, or remixed copy of the resource with others

No Textbook Required: If no textbooks are required, students will not have to purchase books for the course.

Please review the cost of your required materials to determine the best option for you to purchase your materials.

Please note, your opt out selection is for your *entire* semester schedule. You cannot opt out/opt into individual courses. And you must opt out by the due date of your first class, which is the 3rd day after the start of your earliest course.

[Learn new textbook program at JC](#)

For account billing questions, please contact the Jackson College Cashier at jccashier@jccmi.edu

Extras

This class requires a lab equipment kit and specimen kit for the online sections. Please purchase these at the bookstore.

Grading Procedure

Lecture, exams and discussion account for 70% of the overall grade, and laboratory accounts for 30% of the overall grade, and is described here. The class has a total of 1000 points of assessment which is a weighted average of the overall point distribution. There will be approximately five exams in the course, which may include multiple choice, fill-in, short answer, problem solving, and essay. The lowest exam score is dropped to account for eventualities. A missed exam will be considered the dropped exam. The final cannot be dropped. Laboratory should not be missed due to the integrated active learning exercises using inquiry based methods. The labs take a significant amount of time to understand and master, therefore, please recognize the required time and review for mastery of the skillset. If a student misses three laboratories, then that student will have to repeat the course and receive a failing grade for the current semester.

In compliance with Federal Title IV funding requirements, as well as college initiatives, reporting of student participation in classes will occur through recording of attendance.

If you do not participate as expected for a college student, then you will be dropped from the class (meaning you are no longer attending and/or participating in class). There are several reasons you may be

dropped, which I will address in a moment, but it is important to note that once you have been dropped from a class by an instructor you cannot be put back into the class without the instructor's signature.

Possible Reasons for Being Assigned a drop

- Failure to attend class within the first week without contacting the instructor.
- Failure to attend class or make meaningful progress for greater than three (3) sessions without contacting the instructor.
- Failure to take two (2) Unit Exams
- Failure to complete three (3) Laboratory Exercises

These conditions will result in an automatic withdrawal during the next week and your dismissal from the course. If you fail to participate after the last withdrawal date (1 week after midterm) you will not be automatically dropped from the course but will receive a grade of 0.0 (E) for failing to participate in the course.

Grading Scale

GPA	GRADE RANGE
4.0	94-100%
3.5	89-93%
3.0	84-88%
2.5	78-83%
2.0	72-77%
1.5	66-71%
1.0	60-65%
0.5	55-59%
0.0	0-54%

Academic Honesty Policy

Academic Honesty is defined as ethical behavior that includes student production of their own work and not representing others' work as their own, by cheating or by helping others to do so.

Plagiarism

Plagiarism is defined as the failure to give credit for the use of material from outside sources. Plagiarism includes but is not limited to:

- Submitting other's work as your own

- Using data, illustrations, pictures, quotations, or paraphrases from other sources without adequate documentation
- Reusing significant, identical or nearly identical portions of one's own prior work without acknowledging that one is doing so or without citing this original work (self-plagiarism)

Cheating

Cheating is defined as obtaining answers/material from an outside source without authorization. Cheating includes, but is not limited to:

- Plagiarizing in any form
- Using notes/books/electronic material without authorization
- Copying
- Submitting others' work as your own or submitting your work for others
- Altering graded work
- Falsifying data
- Exhibiting other behaviors generally considered unethical
- Allowing your work to be submitted by others

Accessibility

Jackson College understands that cultivating a broadly diverse community is crucial to our educational mission and to our foundational commitment to leadership and service. Jackson College is fully committed to ensuring our courses are accessible to everyone including those with disabilities. We are currently working to increase accessibility and usability of our course materials in order to meet or exceed the requirements of Section 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1991 and Web Content Accessibility Guidelines (WCAG) 2.0. For more information about Jackson College's efforts to ensure accessibility please visit the [Jackson College accessibility web page](#).

If you have an accessibility need in any of our classes please e-mail the Center for Student Success at JCCSS@jccmi.edu or visit the [Center for Student Success web page](#).

At the Center for Student Success (CSS), we are committed to providing all students the opportunity to achieve academic success by providing a variety of support services free of charge to Jackson College students. This includes, but is not limited to, peer and faculty tutoring, mental health referral, temporary assistance with transportation, various workshops/seminars, and the TRIO program.

In addition, the CSS staff is committed to adapting the College's general services to meet the individual needs of otherwise qualified students with disabilities, for the purpose of providing equal access to all programs and facilities.

Course Management

Computer Resources – reliable computer access is necessary for this course, as some course materials can be accessed only through the course webpage. I will post announcements and grades, as well as many other course materials like discussion papers through this system. Simply type in the URL <http://jetnet.jccmi.edu/>.

Collaboration – While JC encourages students to collaborate in study groups, work teams, and with lab groups, each student should take responsibility for accurately representing their own contribution.

Communication with Instructors – Your student email will be the official communication format for any grade requests or participation questions. Please take the time to familiarize yourself with your JC email.

Makeup Policy

Incompletes - Consistent with JC policy, incompletes are granted with instructor permission only in situations where a student is **passing** the course with 90% of the curriculum covered and encounters an unusual emergency that prevents them from completing coursework.

Help

I am available to discuss your needs in this class at which time I am available. The best way to get help for this class is come to my office hours by sending me an official email letting me know when you will arrive.

Academic Advising

It is important to contact a Center for Student Success professional prior to the start of the semester in order to receive accommodations in a timely manner. While we will make every effort to coordinate accommodations in a timely manner, failure to self-identify prior to the start of the semester may delay notification to instructors and timeliness of acquiring accommodations. Accommodations do not automatically carry over to the next semester. Please e-mail JCCSS@jccmi.edu or visit the [Accommodations for Students with Disabilities](#) web page

Student Responsibilities

Requirements beyond scheduled classes or laboratories, e.g., clinicals, extra credit assignments, TBA sessions, field placement, special project instructions, contract learning conditions, study hours required outside class, unscheduled class meetings, attendance at concerts or other required events.

Attendance- Participation Policy

Regular class participation and keeping up on the reading and assignments is strongly correlated with survival in college. It is my recommendation that you plan to do your assignments and take your exams **BEFORE** the last day they are due. If problems occur, there is time to fix them before the deadline.

In compliance with Federal Title IV funding requirements, as well as college initiatives, I will be monitoring student participation on a regular basis and officially reporting student activity throughout the term to assure compliance with college policy and federal regulations. It is imperative that you log in to the course and actively participate *within the first couple of days of the term* to validate your enrollment in the course.

After that, not actively participating in class may result in you being withdrawn from the course. Being withdrawn from a course can have an impact on financial aid, billing, athletic eligibility, and housing status. As a college student you are responsible for how your participation impacts your academic progress; the accountability lies with you.

Caveat

Please note: The format and timing of this course may need to change due to unforeseen circumstances. In particular: school closings, instructor illness, weather, or other situations that may arise.

If you are taking an in -person class, you will be required to complete a Reintegration Video Training course in JetNet prior to being admitted to campus.

All COVID safety protocols in place are based on current guidelines and will be enforced while students are on campus.

Calendar

Calendar

**Schedule is tentative and subject to change given unforeseen events.*

Section	Session Week	Topic	Ch.	Lab Schedule	
Introduction to Geology and Minerals	25-Oct	Introduction, Plate Tectonics, Rocks and Minerals	1, 2, 3	Lab: Graphing, Scientific Measurement	
Rocks and Minerals	1-Nov	Igneous Rocks, Sedimentary Rocks	4, 7	Lab: Mineral ID, Igneous Rock ID	Exam 1
Mountains, Weathering, and Erosion	8-Nov	Metamorphic Rock, Volcanoes and Mountains	8, 5	Sedimentary Rock ID, Metamorphic Rock ID	
Mountains, Sea, and Interior	15-Nov	Mountain Building, Erosion, Earth's Interior	10, 6, 9	Basketball Earth, Isostasy	Exam 2
Action of Water	22-Nov	Water: Running, Ground, and Glacier	12, 13, 14	Practical 1	Exam 3
Geologic Time and Evolution	29-Nov	Geological Time, Evolution	17, 18	Geological Time, Evolution	Exam 4
Finals	6-Dec	Finals Week	17, 18	Practical 2	Exam 5

Important Dates:

MONDAY 09/06/2021	LABOR DAY HOLIDAY-NO CLASSES
WEDNESDAY 11/24- SUNDAY 11/28/2021	THANKSGIVING HOLIDAY-NO CLASSES
SATURDAY 12/18/2021	END OF FALL SEMESTER