



Earth Science

Gel-109-I50

Spring 2021

Number of Credits: 4

Days Class Meets: Tuesday and Thursday

Meeting Times: 7:00 PM in JetNet on Big Blue Button

Location/Venue: Online

Instructor: Steven Albee-Scott, PhD

Contact Phone: Mobile-435-881-4741 (Text)

Contact Email: albeescsteven@jccmi.edu

Online Office Hours: By appointment online

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)

Currently prerequisite free.

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.

General Education Outcomes:

All JC graduates should develop or enhance certain essential skills while enrolled in college.

Essential Competencies

1. Think critically and act responsibly
2. Work productively with others, recognizing individual contributions to group success
3. Exhibit technological literacy

The General Education Outcomes addressed in this class are:

GEO 4: Demonstrate scientific reasoning

Textbook (All students have access watch for an email from the bookstore in your student account)

- The Changing Earth: Exploring Geology and Evolution, 7th Ed. Monroe and Wicander; ISBN10: 1-285-73341-X; ISBN13: 978-1-285-73341-8
- List required textbook by title and ISBN.

Textbook Zero Sample language to paste after textbook:

- **Text Book Zero.** This text is available in a digital format. Please see the links posted on our class Jet Net site. This text is available to rent or purchase in digital format through the JC Bookstore.
- **Open Educational Resources (OERs)** are strongly encouraged. If no textbooks are required, a disclaimer to the effect that students will not have to purchase books for the course:
- **This course uses OER!** Optional resources are available in electronic format as a direct download from the publisher and/or the JetNet shell.

Follett Access

- Please [review the cost of your required materials](#) to determine the best option for you to purchase your materials.
- For more information on the Follett ACCESS Program, you can view the [view the frequently asked questions](#).

If after reviewing the costs, you choose to opt out, you may do so here: www.jccmi.edu/optout. Please note your opt out selection is for your entire semester schedule. You cannot opt out and opt in to individual courses. And you must opt out by the due date for your first class.

If you have questions about materials, please contact the Jackson College Follett bookstore at jackson@bkstr.com. 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 included in your class fees. **Please verify that your mailing address is current with Jackson College.**

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
- Failure to make weekly progress which includes logging into JetNet and actively engaging in the class

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

Course Help and Special Needs - if you have special needs that I should be aware of in order to help you to best learn course material, please let me know as soon as possible. Students requiring special assistance (including those affected by the Americans with Disabilities Act) should contact the **Center for Student Success** in **Bert Walker Hall, 796-8415**. Tutoring services are free at JC - if at any point in the course you feel that you would benefit from a tutor, contact me and/or the CSS.

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

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

Attendance- Participation Policy

For online sections

Just as in a traditional classroom course, 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.

Calendar

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

Section	Session Week	Topic	Ch.	Lab Schedule	
Introduction to Geology and Minerals	07-Jun	Introduction, Plate Tectonics, Rocks and Minerals	1, 2, 3	Lab: Graphing, Scientific Measurement	
Rocks and Minerals	14-Jun	Igneous Rocks, Sedimentary Rocks	4, 7	Lab: Mineral ID, Igneous Rock ID	Exam 1
Mountains, Weathering, and Erosion	21-Jun	Metamorphic Rock, Volcanoes and Mountains	8, 5	Sedimentary Rock ID, Metamorphic Rock ID	
Mountains, Sea, and Interior	28-Jun	Mountain Building, Erosion, Earth's Interior	10, 6, 9	Basketball Earth, Isostasy	Exam 2
Action of Water	05-Jul	Water: Running, Ground, and Glacier	12, 13, 14	Practical 1	Exam 3
Geologic Time and Evolution	12-Jul	Geological Time, Evolution	17, 18	Geological Time, Evolution	Exam 4
Finals	19-Jul	Finals Week	17, 18	Practical 2	Exam 5

Exam schedule for 7 weeks

The exams will be open for the week that it is posted in the calendar and will close the following Monday except for the final which closes on the Friday of the final week. The exam will remain open for eight days giving you the opportunity to work around your schedule. Do not miss an exam because you will not be able to make them up. Your lowest of the first four exams will be dropped. Exam 5 cannot be dropped.

Communication with your Professor

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. Be aware when you send a message to me on JetNet, the email goes to my school email. The reply will go to your school email. If you think I didn't see it, please send me an official email through your my.jccmi.edu account.

First Assignment

Please post your understanding of the following statement to the syllabus recognition discussion in JetNet:

I have read the GEL 109 course information packet (course information, course calendar and academic honesty policy). I understand the information they contain.