



IMPERIAL VALLEY COLLEGE

Note to Instructor: Replace the placeholder text beneath the headings with the appropriate information for your course. Please note that all sections, with the exception of "Other Course Information," are required elements.

Basic Course Information

Semester:	Spring	Instructor Name:	Kevin Marty
Course Title & #:	Geology 110	Email:	Kevin.marty@imperial.edu
CRN #:	20042	Webpage (optional):	n/a
Classroom:	2733	Office #:	2776
Class Dates:	Feb 17-Apr 17	Office Hours:	
Class Days:	T,Th	Office Phone #:	
Class Times:	11:20-2:30 pm	Emergency Contact:	
Units:	3	Class Format/Modality:	hybrid

Course Description

This course, Earth and Space Science, will cover the basic principles of four scientific disciplines: Astronomy (two chapters), Oceanography (one chapter), Meteorology (three chapters), and Geology (six chapters). We will investigate how the Earth's spheres (geosphere, atmosphere, hydrosphere) are connected and interact to influence our lives (biosphere) today and throughout periods of Earth's history. We will also investigate the influence of Space on our planet.

Course Prerequisite(s) and/or Corequisite(s)

None

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Gain critical thinking skills while working on and completing weekly homework assignments which include applying methods such as Venn diagrams, rubrics, and concept maps.
2. Gain awareness of geological events, weather and climate patterns and oceanic circulation on a global scale and understand/evaluate why events/features occur where they do. Assessment done through various homework assignments.
3. Gain knowledge of geological, meteorological, astronomical and oceanic features and processes through lectures, research papers, exams and presentations.

Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. Demonstrate a basic understanding of the nature of matter, and describe the movement of matter and energy through the natural processes on Earth.
2. Explain the character of the sediments, rocks, and minerals of which they are composed, and relate this to the rock cycle.
3. Identify and explain the major subdivisions of Earth and processes acting deep inside Earth that effect the environment at the Earth's surface.
4. Describe the time frame within which natural processes function, and learn ways geologists use to decipher Earth's history.
5. Demonstrate an understanding of the theory of plate tectonics and relate this to earthquakes, volcanoes, mountain building and the evolution of the physical world over million of years.

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6. Identify the cause and effect of earthquakes and how they are measured, and the effect on people.
7. Characterize volcanic activity and identify its natural causes and impact on the environment.
8. Identify landscapes and source of sediments on the sea floor, and show the relationship between geology and ecology of the oceans.
9. Demonstrate knowledge of the dynamics of the sea by understanding near surface and deep sea circulation patterns and interaction with the atmosphere, and the composition and properties of sea water.
10. Identify the processes that effect sea level and shape the shoreline, and understand coastal environments.
11. Describe the composition and structure of the atmosphere, and examine atmospheric circulation, weather systems and storms, along with modern and past climates.
12. Describe the connection among ecology, climate and geology, and understand the character of the land surface and the agents that shape the landscape.
13. Explain the weathering process and the products of weathering.
14. Explain mass wasting and ways to avoid and prevent it.
15. Demonstrate a knowledge and understating of th role of water and wind in earth systems. Processes such as runoff, erosion, deflation and features such as stream, groundwater, and dune systems will be examined.
16. Explain the formation of glacier ice, the ways ice and ice deposits shape the landscape, and the connection between glaciers and other parts of Earth's systems.
17. Demonstrate a knowledge and understanding of the sun, the moon, the planets and other characteristics of the solar system and beyond.

Textbooks & Other Resources or Links

The textbook for this class is titled “The Good Earth”, 3rd Edition, by McConnell, D., and others (ISBN 10: 0073256501 ISBN 13: 9780073256504). **You do not need to purchase the textbook. The chapters for this textbook are provided through OER resources in Canvas.**

Course Requirements and Instructional Methods

Course Philosophy and Teaching Method: The subject of Earth Science is as vast and diverse as the natural world around us. Together, we will explore and visualize this dynamic world in a number of ways; in no way will it be a static collection of facts. Accordingly, we will concentrate on understanding natural processes and how we explore and learn things about our planet, rather than terms and factual trivia. We will concentrate on active, inquiry-based learning and will learn how to observe, think about, and understand our place in the natural environment. The critical inquiry and observational skills that we cultivate this semester should be useful in any profession, since they give you an appreciation of how earth science processes in our natural world impact our environment and society.

It is your responsibility and obligation to complete the required readings each week and prior to any online quizzes.

Tests: There are 2 total tests over four chapters each. Each of these tests is worth 50 points, for a semester total of 100 points. The tests consist of 50 multiple choice/answer, reading comprehension, fill-in-the-blank type questions (each question worth 1 pts for 50 pts total). Your online textbook is your best study guide for the tests along with the chapter quizzes.

Quizzes: there are a total of 12 chapter quizzes scheduled (one for each chapter covered) that generally consist of 20 questions worth ½ point each (so the total points possible for each quiz is 10 pts). You generally have two attempts and no time limit to complete each quiz (your highest score will be recorded). See syllabus for quiz due dates. Some of these questions will be found on your two tests



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described above so are a partial study guide (along with reading the chapters) for your tests. These cannot be made up once each due date (and the one-day grace period) passes.

Discussion Boards/Journal Entries: Discussions are ways to present your viewpoint or what you have learned about a topic to the class; and to respond to your classmate's posts to further discussion on a topic. Discussions are completed through Canvas and are generally worth 10-20 points. Sometimes an initial as well as a response post (to classmate's posts) are required. Not all lessons require a post (click on "Discussions" above to see the schedule); a couple discussion boards require quizzes instead of written posts...ALSO, there are 6-7 Journal Entries required for this course. Journals are a way to connecting topics of the course (and the natural world) to your life. These add up to a significant portion of your grade so please take the time to really experience and think about how you make these connections. Sketches are generally required for each journal entry.

Course Expectations: My role in this class is to provide a framework that includes theory, best practices, activities, and assignments for you to utilize in the development of your knowledge, understanding, and skills. I care very much how and what you learn in this class, but I believe that you are responsible for participating in learning from the activities provided. This class requires significant preparation and reading.

Course Grading Based on Course Objectives

Score/Grade Posting: All scores will be posted on Canvas. You have 7 days after a score has been posted to dispute an entry. After the 7-day period, the score stands as entered. Do not wait until the end of the semester to check your scores. Grades are not assigned by a "curve", where a certain percent is assigned "A", "B", etc. Instead, you are competing against my expectations, not your classmates, and there is no predetermined percentage of "A", "B", and "C". The exact division between letter grades will not be determined until the final points are totaled, but the grade breaks will not be raised above typical values (e.g., the A-B grade break will be 90% or lower, etc.). No items are weighted—your grade is based solely on total points received.

You will have access to your gradebook through Canvas and can monitor your individual scores and overall grade. Please see me for any questions about your grades.

Academic Honesty (Artificial Intelligence -AI)

IVC values critical thinking and communication skills and considers academic integrity essential to learning. Using AI tools as a replacement for your own thinking, writing, or quantitative reasoning goes against both our mission and academic honesty policy and will be considered academic dishonesty, or plagiarism unless you have been instructed to do so by your instructor. In case of any uncertainty regarding the ethical use of AI tools, students are encouraged to reach out to their instructors for clarification.

Accessibility Statement

Imperial Valley College is committed to providing an accessible learning experience for all students, regardless of course modality. Every effort has been made to ensure that this course complies with all state and federal accessibility regulations, including Section 508 of the Rehabilitation Act, the Americans with Disabilities Act (ADA), and Title 5 of the California Code of Regulations. However, if you encounter any content that is not accessible, please contact your



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instructor or the area dean for assistance. If you have specific accommodations through **DSPS**, contact them for additional assistance.

We are here to support you and ensure that you have equal access to all course materials.

Course Policies

Will discuss in detail in class. Attendance, honest effort, meeting deadlines and being mindful and respectful of each other is of utmost importance.

Other Course Information

An extra credit moonlight hike is planned; to be discussed in class.

Financial Aid

Your Grades Matter! In order to continue to receive financial aid, you must meet the Satisfactory Academic Progress (SAP) requirement. Making SAP means that you are maintaining a 2.0 GPA, you have successfully completed 67% of your coursework, and you will graduate on time. If you do not maintain SAP, you may lose your financial aid. If you have questions, please contact financial aid at finaid@imperial.edu.

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

Anticipated Class Schedule/Calendar

[Provide a tentative overview of the readings, assignments, tests, and/or other activities for the duration of the course. A table format as in the example below may be used for this purpose.]

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
Feb 17-20	Syllabus & Introduction to Earth Science The Scientific Method	Chapter 1 Reading Chapter Quiz, Intro Post and Megaflood Assignment due Feb 20
Feb 21-24	Earth in Space	Chapter 2 Reading Chapter Quiz, Discussion Post and Season's Quiz Due Feb 24
Feb 25-28	Near-Earth Objects	Chapter 3 Reading Chapter Quiz, Discussion Post, NEO Assignment Due Feb 28
Mar 1-5	Plate Tectonics	Chapter 4 Reading Chapter Quiz, Discussion Post and Earth's Structure Assignment Due Mar 5
Mar 6	Test 1	Test 1 Chapter's 1-4 Due Mar 6
Mar 7-10	Earthquakes	Chapter 5 Reading



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Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
		Chapter Quiz, Discussion Post and Epicenter Assignment Due Mar 10
Mar 11-14	Volcanoes and Mountains	Chapter 6 Reading Chapter Quiz, Discussion Post and Volcanoes and Plate Boundaries Assignment Due Mar 14
Mar 15-18	Rocks and Minerals	Chapter 7 Reading Chapter Quiz, Discussion Post and Rocks and Minerals Assignment Due Mar 18
Mar 19-22	Geologic Time	Chapter 8 Reading Chapter Quiz, Geologic Time Quiz, Discussion Post and Radioactive Decay Assignment Due Mar 22
Mar 23	Test 2	Test 2 Chapter's 5-8 Due Mar 23

*****Subject to change without prior notice*****