

1. **COURSE TITLE*:** Physical Geology
2. **CATALOG PREFIX/COURSE NUMBER/COURSE SECTION:** PHYS 1104
3. **PREREQUISITES*:** None **COREQUISITE*:** None
4. **COURSE TIME/LOCATION/MODALITY (Course Syllabus – Individual Instructor Specific)**
5. **CREDIT HOURS*:** 4 **LECTURE HOURS*:** 3
LABORATORY HOURS*: 1 **LAB CONTACT HRS*:** 2
6. **FACULTY CONTACT INFORMATION: (Course Syllabus – Individual Instructor Specific)**
7. **COURSE DESCRIPTION*:**

This course introduces the concepts and principles of the Earth's materials and processes. Topics include: concepts of plate tectonics, mineral identification, rock formation, soils, stream development, ground water, seismology, volcanism, glaciation, energy and mineral resources, and their effects on man's environment and society.

8. **LEARNING OUTCOMES*:**
 1. Explain the concepts of plate tectonics.
 2. Identify the basic minerals of the earth's crust.
 3. Distinguish between igneous, sedimentary, and metamorphic rocks in both origin and identification.
 4. List the major parts of the earth's internal structure and describe each
 5. Describe the basic concepts plate boundary dynamics, including sea floor spreading, mountain formation, and earthquakes.
 6. Describe the aspects of down slope movement of surface material.
 7. Recognize and describe various hydrologic features including both surface and groundwater systems.
 8. recognize and describe the geologic work of glacial processes
 9. Interpret topographic and geologic maps.
 10. Describe the earth's various energy and mineral resources.
 11. Recognize the relationship between geologic features and process and the actions of man.
9. **ADOPTED TEXT(S)*:**

Essentials of Geology: 7th edition
Marshak, Ludman

Norton Publishing 2022
ISBN: 978-0-393-88342-8

This is a Follett access and a Norton Inclusive access title.

Follett access and a Norton Inclusive access titles are a digital format in which the student is billed directly through their school account which will show up on their tuition bill as a fee for the course. The e-text will automatically load into canvas when the course is activated. There is also a loose-leaf option for students who prefer print that can be purchased along with the inclusive format.

OR:

Sections that are offered at OFF-SITE locations can be permitted to use older editions of the current approved text (within 6 years from current editions copyright). These older editions must be approved by curriculum committee and/or the department.

10. OTHER REQUIRED: (SEE APPENDIX C FOR TECHNOLOGY REQUEST FORM.)**

A rock kit will need to be checked out from the library to complete the lab portion of this course. This kit is to be checked out as a resource from our library. Failure to return the kit in working condition will result in possible holds on your student account, inability to see/receive transcripts, and a final grade in the class will not be issued until the rock kit is returned.

11. GRADING*:**

Grading will follow the policy in the catalog. The scale is as follows:

- A: 90 – 100
- B: 80 – 89
- C: 70 – 79
- D: 60 – 69
- F: Below 60

12. GRADING PROCEDURES OR ASSESSMENTS: (Course Syllabus – Individual Instructor Specific)

EXAMPLE EVALUATION:

60% Test and quizzes:

- 3 or 4 tests; 50% of the final grade
- 4 – 6 quizzes; 10% of the final grade

25% Labs

- 8 -10 labs; 25% of the final grade

15% Homework

13. COURSE METHODOLOGY: (Course Syllabus – Individual Instructor Specific)

This course may use lecture, discussion, video, and overhead presentations. The course may include chapter and workbook assignments, hand-in assignments, computer assignments, work projects, research papers, and laboratory activities. Many laboratory activities may involve field trips and investigations.

14. COURSE OUTLINE: (Course Syllabus – Individual Instructor Specific)

(example)

Prelude	And Just What is Geology
Chapter 1 -	The Earth in Context
Chapter 2 -	The Way Earth Works: Plate Tectonics
Chapter 3 -	Patterns in Nature: Minerals
Interlude A	Rock Groups
Chapter 4 -	Up from the Inferno: Magma, and Igneous Rocks
Chapter 5 -	The Wrath of Vulcan: Volcanic Eruptions
Interlude B	A surface Veneer: Sediments and Soils
Chapter 6 -	Pages of Earth's Past: Sedimentary Rocks
Chapter 7 -	Metamorphism: A Process of Change
Interlude C	The Rock Cycle
Chapter 8 -	A Violent Pulse: Earthquakes
Interlude D	The Earth's Interior Revisited: Insights from Geophysics
Chapter 9 -	Crags, Cracks, and Crumples: Crustal Deformation and Mountain Building
Interlude E	Memories of Past Life: Fossils and Evolution
Chapter 10 -	Deep Time: How Old is Old?
Chapter 11 -	A Biography of Earth
Chapter 12 -	Riches in Rock: Energy and Mineral Resources
Interlude F	An Introduction to Landscapes and the Hydrologic Cycle
Chapter 13 -	Unsafe Ground: Landslides and Other Mass Movements
Chapter 14 -	Streams and Floods: The Geology of Running Water
Chapter 15 -	Restless Realm: Oceans and Coasts
Chapter 16 -	A Hidden Reserve: Groundwater
Chapter 17 -	Dry Regions: The Geology of Deserts
Chapter 18 -	Amazing Ice: Glaciers and Ice Ages
Chapter 19 -	Global Change in the Earth System

15. SPECIFIC MANAGEMENT REQUIREMENTS*:**

SAMPLE Course Calendar

Week 1	(L.O. 1) Prelude And Just What is Geology
Week 2	(L.O. 2) Chapter 2 - Introduction to Plate Tectonics Chapter 3 - Patterns in Nature: Minerals Lab Activity: Mineral Identification
Week 3	(L.O. 3) Chapter 4 - Up from the Inferno: Magma, Igneous Rocks Chapter 5 - The Wrath of Vulcan: Volcanic Eruptions Lab Activity: Igneous Rock Identification
Week 4	(L.O. 3) Interlude A, B, and C The Rock Cycle and Weather & Soil Lab Activity: Soil Formation and Identification
Week 5	(L.O. 3) Chapter 6 - Pages of Earth's Past: Sedimentary Rocks Lab Activity: Sedimentary Rock Identification
Week 6	(L.O. 3) Chapter 7 - Metamorphism & Metamorphic Rocks Lab Activity: Metamorphic Rock Identification
Week 7	(L.O. 4,9) Interlude E and Chapter 10 - Geologic Time Chapter 9 - Crustal Deformation Lab Activity (Field): Local Strata and Topographic Mapping
Week8	(L.O. 4,5) Chapter 8 - Earthquakes & Earthquake Hazards Interlude D - The Earth's Interior Revisited: Insights from Geophysics
Week 9	(L.O. 4,5) Chapter 2 - Divergent Boundaries: Origin & Evolution of the Ocean Floor Chapter 9 - Convergent Boundaries: Origin of Mountains
Week 10	(L.O. 4,5,6,7) Chapter 13 - Unsafe Ground: Landslides and Other Mass Movements Lab Activity (Field): Investigating Mass Wasting
Week 11	(L.O. 6,7,8) Interlude F Landscapes and The Hydrologic Cycle Chapter 14 - Streams and Floods: The Geology of Running Water Chapter 16 - The Hidden Reserve: Groundwater Lab (Field) Activity: Investigating Stream Processes

Week 12	(L.O. 8) Chapter 18 - Amazing Ice: Glaciers & Ice Ages
Week 13	(L.O. 10) Chapter 17 - Dry Regions: The Geology of Deserts Chapter 15 - Restless Realm: Oceans and Coasts
Week 14	(L.O. 10,11) Chapter 19 - Global Change in the Earth System Chapter 11 - A Biography of Earth
Week 15	(L.O. 10,11) Chapter 12 - Riches in Rock: Energy & Mineral Resources Chapter 1 - The Earth in Context: Planetary Geology
Week 16	FINAL EXAM

16. FERPA:*

Students need to understand that your work may be seen by others. Others may see your work when being distributed, during group project work, or if it is chosen for demonstration purposes. Students also need to know that there is a strong possibility that your work may be submitted to other entities for the purpose of plagiarism checks.

17. DISABILITIES:*

Students with disabilities may contact the Disability Services Office, Central Campus, at 800-628-7722 or 937-393-3431.

18. OTHER INFORMATION*:**

SYLLABUS TEMPLATE KEY

* Item cannot be altered from that which is included in the master syllabus approved by the Curriculum Committee.

** Any alteration or addition must be approved by the Curriculum Committee

*** Item should begin with language as approved in the master syllabus but may be added to at the discretion of the faculty member.