

Kingsborough Community College  
The City University of New York  
Department of Physical Sciences  
EPS 3300 – PHYSICAL GEOLOGY (WITH LABORATORY)  
Syllabus

EPS 3300 – PHYSICAL GEOLOGY (4 crs. 6 hrs.) Study of the nature of the Earth and its processes includes: mineral and rock classification, analysis of the agents of weathering and erosion, dynamics of the Earth's crust as manifest in mountain building, volcanoes and earthquakes, recent data concerning the geology of other planets, field and laboratory techniques of the geologist. ---Prerequisites: Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math or Department permission ---Required Core: Life and Physical Sciences----- Flexible Core: Scientific World (Group E)

Section: SECTION NUMBER    Time: LECTURE AND LABORATORY SCHEDULE FOR SECTION  
Room: ROOM (S) FOR SECTION  
Instructor: INSTRUCTOR FOR SECTION    Email: EMAIL ADDRESS FOR INSTRUCTOR FOR SECTION  
Office Hours: OFFICE HOURS FOR INSTRUCTOR FOR SECTION

**Source materials:** *An Introduction to Physical Geology* 10th or 11th or latest edition, by Tarbuck, Lutgens & Tasa

**Student Learning Outcomes** Students will:

- Differentiate between the three types of plate boundaries by noting common geologic features and processes.
- Classify common physical properties and differentiate minerals and rocks.
- Summarize the relationship between the chemical and physical properties of minerals.
- Analyze igneous, metamorphic, and sedimentary rocks to determine how they formed.
- Compare how different types of magma form and explain their relationship to the formation of intrusive and volcanic igneous features.
- Compare and contrast weathering among different rock types and different environments.
- Identify strata, faults, and folds in geologic sections and summarize the forces and tectonic settings that lead to their formation.
- Apply the principles of relative dating to interpret the geologic history of a cross-section.
- Explain what causes earthquakes and earthquake destruction, and apply the correct procedures to locate the source and calculate the magnitude of an earthquake.
- Differentiate the internal structure and composition of the Earth.
- Compare and contrast depositional and erosional environments, features, and processes associated with streams and shorelines.
- Explain the various parts of the hydrologic cycle including the interaction of surface and groundwater with the solid Earth.

**Topical Outline Lecture:** (Approximate and subject to change upon notification)

Week	Topics	Book Chapter(s)
1	Intro.to Geology/Origin of Earth/Plate tectonics	1, 2(2.1–2.4)
2	Plate tectonics/ Earth's Interior	2(2.5–2.10),12(12.1–12.3)
3	Divergent Boundaries/Matter & minerals	13,3
4	Magma & Igneous Rocks/ Volcanics & Volcanoes	4,5
5	Weathering/Sedimentary Rocks	6(6.1–6.6), 7(7.1–7.5)
6	Sedimentary Rocks / Metamorphic rocks	7(7.6–7.10), 8
7	Geologic time & fossils/Crustal deformation/Convergent Boundaries	9, 10(10.1–10.4), 14
8	Earthquakes/Mass wasting	11,15
9	Running Water/Groundwater	16,17
10	Glaciers/Deserts	18, 19
11	Shorelines/Climate Change	20, 21(21.1–21.9)
12	Our Solar System	24
13	Final Exam - As per official College Final Schedule	

## Laboratory

Date	Topic	Requirements
Lab 1	The Metric System and Physical Measurements	Hand in
Lab 2	Gravity and Buoyancy	Hand in
Lab 3	Specific Gravity of Earth Materials	Hand in
Lab 4	Plate Tectonics	Hand in
Lab 5	Diagnostic properties of Minerals	Hand in
Lab 6	Igneous Rocks	Hand in
Lab 7	Sediments & Sedimentary Rocks	Hand in
Lab 8	Metamorphic Rocks & Rock Cycle	Hand in
Lab 9	Petrographic Microscope	Hand in
Lab 10	Geologic Time: A guide to dating rocks	Hand in
Lab 11	Structure and deformation of rocks	Hand in
Lab 12	Laboratory Final / Student Presentations	Exam/Presentation

### Evaluation:

- 3 Exams – 20% each

Exams are definition, problems, short answer, and essay. One side of a 3x5 index card filled with notes may be created and used for an exam.

- Homework/Presentation - 20%

- Laboratory - 20%

You are responsible for being in laboratory on time. Laboratory assignment cannot be made up. Laboratory reports, unless otherwise specified, must be turned in at the end of class. As part of your laboratory final, you may bring all laboratory reports to class to assist you on your final.

Grades will be awarded as follows: 93% or above=**A**; 90-92.99%=**A-**; 87-89.99%=**B+**; 83-86.99%=**B**; 80-82.99%=**B-**; 77-79.9%=**C+**; 73-76.99%=**C**; 70-72.99%=**C-**; 67-69.99%=**D+**; 63-66.99%=**D**; 60-62.99%=**D-**; <60%=**F**

### Missed Exam/Laboratory/Lecture/Assignment Policy

Attending all classes is mandatory. The textbook is a guide for the course additional material will be covered during lecture meetings. If you miss class, you will miss out on taking notes and this will affect your ability to study for tests and quizzes. If you miss an opportunity to demonstrate your knowledge of the subject matter by missing a duly scheduled exam, laboratory or other assignment, the grading scheme does not apply. Your grade will be determined at the discretion of the instructor. By missing a duly scheduled exam, laboratory or other assignment, you accept and recognize that the instructor must determine your grade within the context of determining the grade of students who did not miss a duly scheduled exam, laboratory or other assignment. Instructor Make-up Policy: SUGGESTED: NO MAKE-UP EXAMS, NO MAKE-UP LABORATORIES OR NO MAKE-UP OTHER ASSIGNMENTS. FINAL EXAM WEIGHTED WITH PENALTY (0-100%) FOR MISSED WORK

**Conduct:** Students are required to follow *The Student Code of Conduct* as stated in the *Student Handbook*.

**Accessibility:** Access-Ability Services (AAS) serves as a liaison and resource to the KCC community regarding disability issues, promotes equal access to all KCC programs and activities, and makes every reasonable effort to provide appropriate accommodations and assistance to students with disabilities. You must contact Access-Ability Services if you require such accommodations and assistance. Your instructor will make the accommodations you need, but you must have documentation from the Access-Ability office for any accommodations.