

Kingsborough Community College  
The City University of New York  
Department of Physical Sciences  
EPS 3800 – INTRODUCTION TO EARTH SCIENCE (WITH LABORATORY)  
Syllabus

**EPS 3800 – INTRODUCTION TO EARTH SCIENCE (4 crs. 6 hrs.)** The earth’s environment, meteorology, geology, astronomy, and oceanography. Field trips and laboratory work included. ----- 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:** Required textbook “*Earth Portrait of a planet*” by S. Marshak (5<sup>th</sup> or later Edition).

**Student Learning Outcomes** Students will:

- Comprehend, interpret and analyze written, oral and graphical information in applying the scientific method to problems in natural science.
- Demonstrate an understanding of fundamental geologic concepts as it relates to Earth processes and landscape evolution through geologic time.
- Differentiate among the major rock forming minerals through their physical properties -Identify the three main rock types (igneous, metamorphic and sedimentary rocks) and place the processes of their formation in the context of the rock cycle model. –
- Understand the Water, Carbon, and Nitrogen Cycles

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

| Week | Topics   | Book Chapter(s)     |
|------|--|---------------------|
| 1    | What is Science/Earth Science?<br>Scale (temporal and spatial).              | 12 & Provided notes |
| 2    | Formation and Differentiation of the Earth.                                  | 1 & 2               |
| 3    | Minerals 5   | 5                   |
| 4    | Soils. Featuring “Dirt! The Movie “ & the KCC Urban Farm.                    | Provided notes      |
| 5    | Sea floor spreading and Plate Tectonics.                                     | 3 & 4               |
| 6    | Igneous rocks and processes<br>Volcanoes & volcanic hazards                  | 6<br>9              |
| 7    | Sedimentary rocks and environments<br>Floods (coastal & inland), landslides. | 7<br>16, 17 & 18    |
| 8    | Metamorphism & Metamorphic rocks   | 8                   |
| 9    | Seismology, Earthquakes and mountain building                                | 10 & 11             |
| 10   | Cycles (rock, hydrological, carbon)  | 14 & Provided notes |
| 11   | Earth’s Biography; 13  | 13                  |
| 12   | Land use and climate change. 22, 23  | 22 & 23             |
| 13   | Final Exam - As per official College Final Schedule                          |                     |

## Laboratory

| Date   | Topic                                 | Requirements          |
|--------|---------------------------------------|-----------------------|
| Lab 1  | Metric System                         | Hand in               |
| Lab 2  | Density and Buoyancy                  | Hand in               |
| Lab 3  | Specific Gravity of Minerals          | Hand in               |
| Lab 4  | Farm Links Lab                        | Hand in               |
| Lab 5  | Plate tectonics                       | Hand in               |
| Lab 6  | Earth Materials Minerals              | Hand in               |
| Lab 7  | Earth Materials Rocks 1 - Igneous     | Hand in               |
| Lab 8  | Earth Materials Rocks 2 - Sedimentary | Hand in               |
| Lab 9  | Earth Materials Rocks 3 - Metamorphic | Hand in               |
| Lab 10 | Beach Sands/Petrographic microscope   | Hand in               |
| Lab 11 | Petrographic microscope/ Beach Sands  | Hand in               |
| Lab 12 | Student presentations.                | Student Presentations |

### Evaluation:

- 3 Exams – 20% each

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

- Homework / Projects / Presentations - 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.