

**El Paso Community College  
Syllabus  
Part II  
Official Course Description**

|                                 |   |          |          |          |         |     |     |
|---------------------------------|---|----------|----------|----------|---------|-----|-----|
| <b>SUBJECT AREA</b>             | <u>Geology</u>  |          |          |          |         |     |     |
| <b>COURSE RUBRIC AND NUMBER</b> | <u>GEOL 1305</u>  |          |          |          |         |     |     |
| <b>COURSE TITLE</b>             | <u>Environmental Geology</u>  |          |          |          |         |     |     |
| <b>COURSE CREDIT HOURS</b>      | <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>3</u></td> <td style="text-align: center;"><u>3</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td style="text-align: center;">Credits</td> <td style="text-align: center;">Lec</td> <td style="text-align: center;">Lab</td> </tr> </table> | <u>3</u> | <u>3</u> | <u>0</u> | Credits | Lec | Lab |
| <u>3</u>                        | <u>3</u>  | <u>0</u> |          |          |         |     |     |
| Credits                         | Lec   | Lab      |          |          |         |     |     |

**I. Catalog Description**

Studies the interrelationships between humans and the environment from a geological perspective with emphasis on environmental regulations, ethics, methods of waste disposal, types of pollution, case studies, and an introduction to the process of environmental cleanups and the remediation of contaminated areas.  
**Prerequisite: GEOL 1301 and 1101 or GEOL 1303 and 1103. (3:0).**

**II. Course Objectives**

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

- A. Outline and describe environmental regulations at the federal, state, and local level.
- B. Relate the ethics of conducting business, commerce, and everyday activities and the environment.
- C. Outline and describe proper waste disposal methods.
- D. Describe the design of a modern landfill and its environmental protection systems.
- E. Describe the particles of the atom, the periodic table of the elements, the characteristics of igneous, sedimentary, and metamorphic rocks and the hydrologic cycle.
- F. Describe how natural resources such as mineral deposits and fossil fuels form and are used.
- G. Explain the concept of peak oil.
- H. Explain what is meant by carbon sequestration.
- I. Describe the basics of soil composition, formation, importance and loss through erosion.
- J. List the evidence for the current episode for global warming and the proposed consequences.
- K. Outline and describe pathways of pollution on land, in the water, and in the air.
- L. List the sources of fresh water for human use, the role of snow melt on surface and groundwater recharge, and the role of irrigation in the development of agriculture.
- M. Correlate knowledge of science with the use and development of alternate forms of producing energy (solar, wind, tidal, etc.) that cause less pollution.
- N. List the advantages and disadvantages of ways to produce energy (fossil fuels, solar, tidal, etc) including the economics, health risks, and politics.
- O. Outline and describe the process of undertaking remediation of contaminated areas to be fit for human use.
- P. Examine the impact of human activity on the environment including industrialization, agricultural activity, population increase and urbanization.
- Q. Research and describe specific case studies involving examples of waste disposal, contamination, or at-risk environments around the United States.

**III. THECB Learning Outcomes (ACGM)**

Upon successful completion of this course, students will:

1. Recognize, describe, and quantitatively evaluate earth systems, including the land, water, sea, and atmosphere, and how these function as interconnected ecological systems.
2. Assess environmental challenges facing humans caused by their interaction with the physical and biological environment (e.g., population growth, energy resources, food production, pollution, water and resource use).
3. Acquire a scientific vocabulary and critical thinking skills related to environmental science.
4. Assess the effectiveness and feasibility of environmental policy and its impact.

**IV. Evaluation****A. Exams**

Number and frequency of exams are at the discretion of the instructor, although a midterm and final exam are required at a minimum. Exam content should consist of at least 50% essay or narrative student response. The remainder of the content of each exam is at the discretion of the instructor.

**B. Case Studies**

Number and frequency of case studies are at the discretion of the instructor, although at least four should be assigned throughout the course. Each case study should consist of a hypothetical real-world problem involving material covered in the course. Student response should involve a narrative response with figures, diagrams, tables, and/or graphs as needed. Group completion of case studies is at the discretion of the instructor.

**C. Grading Scale**

| <u>Average Grade</u> | <u>Letter Grade</u> |
|----------------------|---------------------|
| 90 – 100             | A                   |
| 80 – 89.9            | B                   |
| 70 – 79.9            | C                   |
| 60 – 69.9            | D                   |
| 0 – 59.9             | F                   |
| Incomplete           | I                   |
| Withdrawn            | W                   |

**D. Remediation**

Students requiring additional help may be referred to tutoring services and encouraged to visit the instructor during the instructor's office hours.

**V. Disability Statement (American with/Disabilities Act [ADA])**

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Room C-112 (831-2426); TM Room 1400 (831-5808); RG Room B-201 (831-4198); NWC Room M-54 (831-8815); and MDP Room A-125 (831-7024)

**VI. 6 Drop Rule**

Students who began attending Texas public institutions of higher education for the first time during the fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.