Catalog Course Description:

Introduction to fundamental physical processes within and upon the Earth’s surface, human interactions with the environment and environmental issues associated with resource utilization and management.

Entry Level Standards:

Students should have good note-taking, reading, and writing skills. The course is open to first and second year students.

Prerequisites:

None

Textbook(s) and Other Reference Materials Basic to the Course:


I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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| 1    | Introduction to Environmental Geosystems  
      | Dynamic Earth Systems |
| 2    | Dynamic Earth Systems |
| 3    | Geologic Time and Earth History |
| 4    | Lithosphere: Rock & Sediment System  
      | Exam 1 |
| 5    | Lithosphere: Resources, Hazards, & Change |
| 6    | Lithosphere: Resources, Hazards & Change  
      | Soil Systems and Weathering |
| 7    | Soil Systems and Weathering |
II. Course Objectives*:

A. Develop an environmental awareness through the synthesis of anthropogenic and natural forces. II & III

B. Understand the natural processes that are responsible for major catastrophic events such as flooding, landslides, and volcanic activity. II & III

C. Appreciate the importance of good management practices for our air, water, and land resources. II & III

D. Understand the natural forces causing continual environmental changes on a global basis. II & III

E. Understand the need for land use planning and the major environmental laws that regulate our use of land and other natural resources. II & III

F. Understand the geologic and environmental effects on human health. II & III

*Roman numerals after course objectives reference goals of the Civil Engineering Technology program.

III. Instructional Processes*:

Students will:

1. Prepare short research papers. Communication Outcome, Information Literacy Outcome

2. Participate in classroom discussions which challenge the students’ ability to think creatively and visualize complex spatial and mathematical relationships to solve problems. Communication Outcome, Numerical Literacy Outcome, Active Learning Strategy, Personal Development Outcome
3. Emphasize individual and corporate environmental responsibilities in written assignments and discussions. Communication Outcome, Transitional Strategy

*Strategies and outcomes listed after instructional processes reference Pellissippi State’s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

IV. Expectations for Student Performance*:

Upon successful completion of this course, the student should be able to:

1. Discuss the cultural aspects of a society that are responsible for its environmental actions. A
2. Discuss the Fundamental Concepts of environmental geology. A,B
3. Discuss the geological processes that are responsible for the creation and modification of earth materials. B,D
4. Discuss the formation of soils and their engineering properties. B,D
5. Discuss the cause, consequences, and control of natural processes such as floods, landslides, earthquakes, volcanoes, hurricanes, and coastal hazards. B
6. Discuss the connection between water quality and human health. C,E,F
7. Discuss the natural and anthropogenic factors that contribute to water pollution. A,B,C
8. Discuss waste treatment processes. C,E
9. Describe what constitutes a hazardous waste and what effects do hazardous wastes have on human health. C,F
10. Discuss the environmental consequences of economic and energy policies and how our mineral resources are particularly affected. C,F
11. Discuss the cause and effects of air pollution. C,D,F
12. Discuss the connection between human health and the natural geologic environment. F
13. Discuss the cause and potential impacts of a long-term change in global weather. D,F
14. Discuss the importance of land use and long-range land use planning in the management of our natural resources. C,D,E,F
15. Discuss the purpose of major environmental legislation and what federal or state agency has responsibility for enforcing the legislation. C,D,E,F

*Letters after performance expectations reference the course objectives listed above.

V. Evaluation:

A. Testing Procedures: 65% of grade

Four examinations are scheduled as shown on the class schedule and will consist of essay questions, short answer questions, and definitions. One exam may be made up if the student has a valid excuse for missing the exam, but it must be made up within one week from the
date it was given.

B. Laboratory Expectations:

N/A

C. Field Work: 10% of grade

Unscheduled, short quizzes may be given. They will cover the material for that day or the previous class. Quizzes may not be made up. Participation in classroom discussions is important. A portion of the class will be used for discussion of current environmental issues or other environmental issues that are appropriate to the class.

D. Other Evaluation Methods: 25% of grade

Four papers will be required as shown on the class schedule. Each paper must be a minimum of four pages in length, double spaced. They are to be neatly typed on 8½ by 11 inch, 20 pound or better paper and have a professional appearance. There must be a cover page containing the title of the report, the students name and course name, and the date. The cover page is to be followed by the report followed by a list of at least two references excluding the course textbook. The references must be listed in one of the acceptable styles found in style manuals or English composition textbooks. The student is strongly encouraged to consult with the writing tutor in the Learning Center for assistance in preparation of these reports.

E. Grading Scale:

<table>
<thead>
<tr>
<th>Score</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>86-89</td>
<td>B+</td>
</tr>
<tr>
<td>80-85</td>
<td>B</td>
</tr>
<tr>
<td>76-79</td>
<td>C+</td>
</tr>
<tr>
<td>70-75</td>
<td>C</td>
</tr>
<tr>
<td>60-69</td>
<td>D</td>
</tr>
<tr>
<td>0-59</td>
<td>F</td>
</tr>
</tbody>
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VI. Policies:

Attendance Policy:

Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course (Pellissippi State Catalog). Individual departments/programs/disciplines, with the approval of the vice president of Academic and Student Affairs, may have requirements that are more stringent.