

El Paso Community College

Syllabus

Part II

Official Course Description

SUBJECT AREA	<u>Biology</u>
COURSE RUBRIC AND NUMBER	<u>ENVR 1401</u>
COURSE TITLE	<u>Environmental Science I</u>
COURSE CREDIT HOURS	<u>4 3 3</u> Credits Lec Lab

I. Catalog Description

Provides interdisciplinary study of both natural (biology, chemistry, geology) and social (economics, politics, ethics) sciences as they apply to the environment. Focus on current global concerns, including, global warming, overpopulation, deforestation, pollution, biodiversity and resource use. Practical laboratory experience emphasizes the application of fundamental principles of biology, chemistry and geology as well as critical thinking and analysis. **(3:3). Lab Fee.**

II. Course Objectives

- A. Unit I. Foundations of Environmental Science
1. Describe the nature of environmental science.
 2. Characterize the interdisciplinary nature of environmental science.
 3. Discuss the Scientific Method and how science operates.
 4. Evaluate the concepts of sustainability and sustainable development.
 5. Recognize the pressures on the global environment.
- B. Unit II. Environmental Systems
1. Describe the nature of environmental systems.
 2. Explain and apply the fundamentals of environmental chemistry.
 3. Identify energy flow and the metabolic processes in life.
 4. Compare and contrast how carbon, phosphorous, nitrogen, and water cycle through the environment.
- C. Unit III. Evolution, Biodiversity, Ecology
1. Describe evolution and the process of natural selection.
 2. Identify the levels of ecological organization and the concepts that accompany them.
 3. Explain and apply the fundamentals of population growth, including human populations.
 4. Compare and contrast the major types of species interactions.
 5. Characterize the concept of energy flow and apply the concept to trophic levels and food webs.
 6. Describe the terrestrial biomes of the world.
 7. Describe biodiversity, conservation, and the benefits of maintaining biodiversity.
- D. Unit IV. Environmental Issues
1. Discuss the major environmental issues such as Human Populations; Soil, Agriculture, and Food; Conservation; Environmental Health; Water; Atmospheric Science and Pollution; Global Climate Change; Geology and Mining; Renewable and Nonrenewable Energy Sources; and Waste Management.

2. For each of the topics above, describe current trends and impacts of each as well as the current response to each.

E. Unit V. Environmental Policy

1. Discuss the concepts of economic theory, environmental economics, and ecological issues and their implications on the environmental policies of the United States and the international community.
2. Delineate the steps of the environmental policy process.
3. Contrast the different approaches to environmental policy.

III. Evaluation

A. Pre-assessment NOT required

B. Post-Assessment

1. Lecture (75% of total grade); the type and number of exams will be determined by the instructor. A minimum of 5 written lecture exams are recommended.
The type of exams can be multiple choice, true-false, etc., and it is very desirable to include a section to evaluate the student's written expression (objective/essay combination).
Take-home exams are not recommended for this course. No exam will be dropped in calculating the final grade. All students are required to take the final exam.
2. Laboratory (25% of total grade); 3-4 grades based on practicums, group activities, and presentations. The evaluation methods, frequency, and individual weight of each assessment method is to be determined by the instructor.

C. Grading Scale:

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

IV. Disability Statement (Americans 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 Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

V. 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.