

EES 315 Environmental Science and Society

Dr. Roy Wilson

Department of Environmental Earth Science

Introduction

This course is an introduction to how scientists approach some of the serious environmental problems facing our society. We will seek to understand how scientists acquire environmental data and how this data is used to mitigate environmental problems such as water pollution, acid rain, climate change, and food resources. We will also discuss the limits of science in trying to solve these problems.

This is a compressed course and is self-directed. It requires the student to be self-motivated and to devote a minimum of eight to ten hours each week to the course. If you cannot do this, you should not attempt it. You cannot wait until the day before assignments are due to begin working. This results in poor quality work and low grades. Set a regular weekly schedule and stick to it!

Objectives

1. Evaluate the quality of scientific data and its interpretation in published studies.
2. Acquire and synthesize data needed to apply science to the needs of society
3. Apply scientific methods and knowledge in making and evaluating decisions in human affairs.
4. Recognize the limitations of science in addressing certain societal problems.

Course Components – Course component instructions are included in each topic folder on the course contents page. Click on the appropriate folder to access the instructions.

1. Lectures – The lectures cover facts and concepts relevant to each topic. You should listen to the lectures carefully and take notes. Access the lectures by clicking on the appropriate topic folder on the course content page. You may also access the slides included in the lecture in the appropriate topic folder.
2. Study Questions – There is a set of 12-15 study questions for each topic. These are the facts and concepts you should learn from the lectures. The answers should be single-spaced and written in complete sentences. Most answers are from 1-3 sentences. Access the study questions by clicking on the appropriate topic folder on the course content page.
3. Analysis Questions – The analysis questions go beyond the facts and concepts to elicit your view on complex or controversial questions. Using what you have learned in the lectures and articles, you should write ½ to 1 page single spaced answers to each analysis question. There is often no “correct” answer to an analysis question. You will be assessed by the evidence you use to support your viewpoint. You are encouraged but not required to bring in outside material (e.g. web, optional texts) to help you answer the questions. Access the study questions by clicking on the appropriate topic folder on the course content page.
4. Article Reviews – There are three article reviews each week. You may choose any article from the text. You may want to choose one that is similar to that week’s topic. Access the article review instructions by clicking on the appropriate topic folder on the course content page.
5. Assignment Submissions – Submit the assignments to the instructor by Monday midnight of each week. **LATE ASSIGNMENTS WILL NOT BE ACCEPTED. THIS MEANS THAT ANY MATERIAL SUBMITTED AFTER THE DUE DATE WILL RECEIVE A ZERO.** Access the submission instructions by clicking on the appropriate topic folder on the course content page.

What You Should Do Each Week

1. Listen to the lectures and take notes.
2. Answer the study questions.
3. Answer the analysis questions.
4. Complete the two article reviews.
5. Submit the assignments before or on the due dates. Be sure to follow the assignment submission format!
Click on the link in the course components folder on the course content page for instructions.

Syllabus – Click on the appropriate folder or file on the course content page to access the assignments

<u>Week</u>	<u>Topic</u>	<u>Due Date</u>
1	1. Environmental History Lecture Study Questions Analysis Questions Lecture Slides 2. The Human Population Lecture Study Questions Analysis Questions Lecture Slides 3. Food Resources Lecture Study Questions Analysis Questions Lecture Slides Article Reviews 1,2,3	
2	4. Solid, Toxic, and Hazardous Waste Lecture Study Questions Analysis Questions Lecture Slides 5. Water Resources Lecture Study Questions Analysis Questions Lecture Slides 6. Water Pollution Lecture Study Questions Analysis Questions Lecture Slides Article Reviews 4,5,6	
3	7. Acid Rain Lecture Study Questions Analysis Questions Lecture Slides	

8. Energy Resources Lecture

Study Questions

Analysis Questions

Lecture Slides

9. Climate Change

Study Questions

Analysis Questions

Lecture Slides

Article Reviews 7,8,9

Texts

Required

Annual Editions: Environment, McGraw-Hill

You may use any edition from the last three years. The text is the source for the article reviews. The text may be purchased from the university bookstore or from an on-line source (e.g. Amazon.com).

Optional

There are numerous environmental science texts which cover material similar to the lecture material. If you would like a text to clarify lecture topics or extend your knowledge of individual topics, examples are listed below. These may be purchased from on-line sources. Any edition within the last three years would be adequate. Used editions are often available.

Williams, Linda. Environmental Science Demystified. McGraw Hill. This text is only \$19.95 new. It is not as extensive as the other ones but has very good basic information.

Brennan, Scott and Jay Withgott. Environment: The Science behind the Stories. Pearson.

Cunningham, William P., Cunningham, Mary Ann, and Barbara Woodworth Saigo. Environmental Science: A Global Concern. McGraw Hill.

Raven, Peter H. and Linda R. Berg. Environment. John Wiley and Sons, Inc.

Enger, Eldon D. and Bradley F. Smith. Environmental Science: A Study of Interrelationships. McGraw Hill.

Questions

The fastest way to get questions answered is by e-mail. Use the e-mail tool to send questions and to attach assignments.

Grading

Study Questions – 50%

Analysis Questions – 25%

Article Reviews – 25%

Access the assessment tool to check on your grades. The grades will be posted by midnight on Wednesday of each week.