

Department: NRME

Course No.: 100

Credits: 3

Title: Environmental Science

Contact Person: Isaac M. Ortega

Content Area: CA 3 Science and Technology

Catalog Copy: 100. Environmental Science. First semester. Three credits. Ortega. An introduction to basic concepts and areas of environmental concern and how these problems can be effectively addressed. Topics include human population; ecological principles; conservation of biological resources; biodiversity; croplands, rangelands, forestlands; soil and water conservation; pollution and water management; and wildlife and fisheries conservation.

Course Information:

A. Upon completion of the course, the student should be able to:

1. Demonstrate knowledge of natural resources systems and gain understanding of some of the major environmental problems at the local and at the global level;
2. Gain appreciation for and knowledge of various disciplines in natural resource conservation;
3. Understand how professionals in the field are involved in coping with and solving problems.

B. Grades will be based upon two exams, a final exam, bi-weekly quizzes, media whip participations (discussion of latest news about the environment) and four assignments.

C. Scientific method, Human Population, History of conservation, Basic Ecology, Biodiversity, Conserving biological resources, Land resources: public vs. private, World hunger, Soil conservation, Water conservation, Aquatic environments, Wildlife/Fisheries conservation, Pollution, contamination and waste management.

Meets Goals of Gen Ed: Become articulate: many of the environmental issues covered in class are obtained by the students by reviewing the media and government internet sites. Students will be taught how to seek information about the environmental issues beyond the US borders and how these affect us and the rest of the world.

Acquire critical judgment: basic knowledge of basic concepts about the environment make the students aware of how the media and governments can manipulate the facts.

Acquire awareness of their era and society: many of the environmental problems today are based on the overpopulation of the planet by humans. Students are taught how human population has affected certain environments and how others have been able to make improvements on specific cases, such as agricultural processes and hunger.

Acquire a working understanding of the processes by which they can continue to acquire and use knowledge: students are taught how to use the scientific method to better understand the environmental issues. Basic concepts of ecological processes are taught so students better understand how the environmental problems originated and how these problems can be solved. This knowledge will stay with them for the rest of their life and they will pass it on to the next generation.

CA 3 Criteria: 1. Explore an area of science... This course introduces the broad area of environmental science. Students learn the effects of overpopulation of a species over the environment, starting with human overpopulation.

2. Promote an understanding of the nature... To better understand environmental problems students are taught the scientific method. Ecological principles are taught and how they relate to the current and past problems of the environment. Possible solutions to these problems are presented to the students by using the scientific method.

3. Introduce students to unresolved questions... Through assignments students learn on how to work on some of the unresolved questions. One of the assignments is to find and understand several critical environmental problems standing 20 years ago, and determine how these problems were addressed.

4. Promote interest, competence, and... The more the person knows about their environment the better chances are for avoiding serious mistakes at the personal (i.e.: dumping car oil on a field), or society level (i.e.: non-point pollution effect on rives and lakes). This type of knowledge will be passed on to family and neighbors. At the same time when students learn how the environment works the more chances for them to try to learn more about the local problems.