



# ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE

---

Insert Teacher Name

Insert Room Number

Full Year

Insert Period

Insert Email Address

## COURSE DESCRIPTION

---

The Advanced Placement Environmental Science course is a multi-disciplinary course that presents the processes and interrelationships of Earth's natural systems. The course investigates the environmental issues and problems that occur within that context, both natural and man-made. Information is presented with an analytical and interdisciplinary perspective in a classroom setting, as well as in a laboratory setting with extensive field experiences. Students in this college-level course will deepen their understanding of scientific principles and concepts studied in Biology, Chemistry and Earth Science. They will identify, discuss, and constructively develop alternative solutions to resolve and/or prevent a number of environmental problems.

**This course is part of the University of Connecticut's ECE Program and students can apply for college credits for Science NRME 1000 at the University of Connecticut.**

## COURSE OBJECTIVES

---

Students will understand that:

- The stability of an ecosystem is a balance between competing effects
- The fundamental life processes of plants and animals depend on a variety of chemical reactions that occur in specialized areas of the organism's cells
- The frequency of an allele in a gene pool of a population depends on many factors and may be stable or unstable over time
- Evolution is the result of genetic changes that occur in constantly changing environments
- Plate tectonics operating over geologic time has changed the patterns of land, sea and mountains on Earth's surface
- Energy enters the Earth system as solar radiation and eventually escapes as heat
- Heating of the Earth's surface and atmosphere by the sun drives convection within the atmosphere and oceans, producing winds and ocean currents
- Climate is the long term average of a region's weather and depends on many factors
- Each element on Earth moves among reservoirs which exist in the solid earth, in oceans, in the atmosphere, and within and among organisms as part of biogeochemical cycles
- Life has changes Earth's atmosphere and changes in the atmosphere affect conditions for life

## UNITS OF STUDY

---

- Earth Systems and Resources
- The Living World
- Population
- Land and Water Use

- 
- Energy Resources and Consumption
  - Pollution
  - Global Change

---

## COURSE POLICIES AND REQUIREMENTS

---

### GRADING

Summative Assessments:	100%
Formative Assessments:	0%
Behavioral Characteristics:	0%

Insert Additional Grading Information Here

### MATERIALS

Insert Course Materials Here (ie. Textbook, Binder, Calculator, Highlighters)

### EXPECTATIONS OF STUDENTS

Insert Course Expectations Here

### EXTRA HELP

Insert Course Expectations Here

### RESOURCES

#### BOOKS

Carsen, Rachel, Silent Spring. Mariner Books, 2002 (new edition).

Egan, Timothy, The Worst Hard Times. Houghton Mifflin, 2003.

Miller, Tyler G., Living in the Environment, 2004, Brooks/Cole, 13th edition with CD-ROM

Safina, Carl, Song for the Blue Ocean: Encounters Along the World's Coasts and Beneath the Seas. Owl Books, 1999

#### OTHER RESOURCES

New York Times

Discover

Nature

National Geographic

NPR

CT Post

Journals from the Greenfile Database (LMC)

U.S. Census Bureau [www.census.gov/ipc/www/idbsum.html](http://www.census.gov/ipc/www/idbsum.html)

Global Change Data and Information Systems <http://globalchange.gov/>