I. **OVERVIEW**  
The following information will appear in the 2009 - 2010 catalog

**ENSCI-108 Environmental Conservation**  
3 Units

Study of the world's environment to sustain the highest quality of life. Includes study of ecology, populations, environmental pollution, conservation of natural resources including: energy, water, soils, forests, rangelands, and wildlife. Field trips might be required. Course is applicable to the associate degree. General Education:  
CSU-GE - B2  
IGETC Category: IGETC - 5B

II. **LEARNING CONTEXT**  
Given the following learning context, the student who satisfactorily completes this course should be able to achieve the goals specified in Section III, Desired Learning:

A. **COURSE CONTENT**

1. **Required Content:**

   A. Environmental science and ecological principles
   1. Understanding the environment
   2. Species interaction
   3. Ecosystems—local, global
   B. Population and environmental health
   1. Population dynamics
   2. Environmental health and toxicology
   C. Food, land and biological resources
   1. World hunger
   2. Soil conservation
   3. Sustainable agriculture
   4. Biodiversity
   5. Land use—forests and rangelands
   D. Physical resources
   1. Air, climate and weather
   2. Air pollution
   3. Water pollution
   4. Conventional energy
   5. Energy cycles
   E. Society and the environment
   1. Solid, toxic and hazardous waste
   2. Urbanization
   3. Conclusions and analysis

B. **HOURS AND UNITS**

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<tr>
<th>INST METHOD</th>
<th>TERM HOURS</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>Lect</td>
<td>54.00</td>
<td>3.00</td>
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<tr>
<td>Lab</td>
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C. METHODS OF INSTRUCTION (TYPICAL)

Instructors of the course might conduct the course using the following method:

1. Lecture.
2. Films, slides, and overhead projections.
3. Field experiences.
4. Group or individual project that includes written assignments, problem-solving, evaluation, planning, and implementation of the scientific method.
5. Identification and implementation of appropriate environmental considerations.

D. ASSIGNMENTS (TYPICAL)

1. EVIDENCE OF APPROPRIATE WORKLOAD FOR COURSE UNITS

Time spent on coursework in addition to hours of instruction (lecture hours)

   a. Study for written examination.
   b. Daily reading of materials.
   c. Weekly research.
   d. Per term, two essays.
   e. Preparation for group presentation.

2. EVIDENCE OF CRITICAL THINKING

Assignments require the appropriate level of critical thinking

   a. Write an essay that cites two specific forms of environmental degradation affecting each of these five major ecosystems.
   b. Write an essay comparing and contrasting primary and secondary succession citing at least four major events within the evolutionary process. Employing the principles of the scientific method in a term project (A) or research paper (B), students will demonstrate, or investigate an environmental conservation practice.
   c. As a final exam question: Write a reflective essay evaluating their lifestyle in terms of meeting the tenets for creating a sustainable future. The final essay should minimally address the following points: 1) Describe and analyze your environmental impact as a consumer in terms of the four leading consumption-related environmental problems: air pollution, global climate change, changes in natural habitat, and water pollution; 2) Identify the five levels on which people can participate in working towards a sustainable future; 3) Evaluate your lifestyle in terms of the above five levels and describe how you can realistically modify your lifestyle in a more sustainable fashion; and 4) Identify and discuss three Central Valley environmental issues, their causes and possible solutions.

E. TEXTS AND OTHER READINGS (TYPICAL)

J Wiley and Sons in collaboration with the National Geographic Society.


III. DESIRED LEARNING

A. COURSE GOAL

As a result of satisfactory completion of this course, the student should be prepared to:

Analyze the major ecosystems of the world as well as local ecosystems and evaluate the impact of man's current and past management of the World’s environment to sustain the highest quality of life.

B. STUDENT LEARNING GOALS

Mastery of the following learning goals will enable the student to achieve the overall course goal.

1. Required Learning Goals

Upon satisfactory completion of this course, the student will be able to:

a. Evaluate the environmental conditions of humans in relationship to their total environment.

b. Analyze historical development of natural resources use to sustain for a higher quality life for humankind.

c. Interpret information about the environment.

d. Relate the broad principles of environmental conservation learned in class to everyday life.

e. List and describe soil conservation methods.

f. Evaluate the energy flow cycle.

g. Analyze the hydrologic cycle.

h. Analyze air and water pollution causes and discuss possible solutions.

i. Analyze the cause of solid, toxic and hazardous waste.

j. Evaluate land use policies.

k. Evaluate rangeland ecology topics.

l. Analyze the major ecosystems of the world as well as local ecosystems.

m. Explain the principles of the scientific method.
IV. METHODS OF ASSESSMENT (TYPICAL)

A. FORMATIVE ASSESSMENT

1. Evaluation of essay comparing and contrasting primary and secondary succession citing at least four major events within the evolutionary process.

2. Evaluation of essay that cites two specific forms of environmental degradation effecting each of these five major ecosystems.

3. Evaluation of small group presentation.

4. Evaluation of student answers and small group discussion of a set of questions drawn from the readings and lectures.

5. Evaluation of student participation in debates.

6. Evaluation of written examination, with student scoring at least 70%.

B. SUMMATIVE ASSESSMENT

1. Comprehensive final exam

2. Evaluation of student documentation and successful implementation of an environmental conservation activity.

3. Final exam essay

4. Lecture examinations