

# NR 001: CONSERVATION OF NATURAL RESOURCES

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**Originator**

cmayes

**Justification / Rationale**

Post migration DE checklist entry

**Effective Term**

Fall 2019

**Credit Status**

Credit - Degree Applicable

**Subject**

NR - Natural Resources

**Course Number**

001

**Full Course Title**

Conservation of Natural Resources

**Short Title**

CONSV NATRL RESRS

**Discipline****Disciplines List**

Agriculture

**Modality**

Face-to-Face

100% Online

**Catalog Description**

This environmental science course encompasses a study of general ecological principles including biological energy relationships, biogeochemical cycles, population dynamics, limiting factors, biotic communities, principles of ecosystem sustainability, ecosystem change, and biodiversity. Environmental issues are examined from an ecological perspective and include such topics as water availability and quality, fossil fuels and renewable energy resources, air pollution, global atmospheric issues, hazardous materials, and human population growth. Emphases are placed on the effects of environmental problems upon all living organisms, and the role of human beings in reducing their impact on this planet. Suggested for Biological Sciences General Education Requirements.

**Schedule Description**

This environmental science course examines the impacts of humans on this planet. Topics covered include ecology, water, pollution, atmospheric change, energy and population. Advisory: ENG 061 and concurrent enrollment in NR 001L IGETC: 5B

**Lecture Units**

3

**Lecture Semester Hours**

54

**Lab Units**

0

**In-class Hours**

54

**Out-of-class Hours**

108

**Total Course Units**

3

**Total Semester Hours**

162

**Prerequisite Course(s)**

Advisory: ENG 061 and concurrent enrollment in NR 001 L

**Required Text and Other Instructional Materials****Resource Type**

Book

**Author**

Withgott, J., Laposata, M.

**Title**

Essential Environment: The Science Behind The Stories

**Edition**

5th

**City**

New York

**Publisher**

Pearson Publishing

**Year**

2015

**College Level**

Yes

**Flesch-Kincaid Level**

12

**Class Size Maximum**

36

**Entrance Skills**

Identify and compose a paragraph as a discrete unit of thought organized by a single topic.

**Requisite Course Objectives**

ENG 061-Use theses to organize paragraphs into coherent analyses.

ENG 061-Recognize features of style such as purpose, audience and tone integrate these elements into academic and professional writing.

**Entrance Skills**

Read, comprehend, and summarize 8th grade level readings and identify main ideas and supporting details.

**Requisite Course Objectives**

ENG 061-Demonstrate the ability to read and respond in writing beyond the literal interpretation of the text.

**Entrance Skills**

Recognize and explain patterns of idea development in short readings and academic writing

### Requisite Course Objectives

ENG 061-Demonstrate the ability to think critically and express ideas using various patterns of development.  
 ENG 061-Demonstrate the ability to read and respond in writing beyond the literal interpretation of the text.

### Course Content

1. Ecology
  - a. Basic terms
  - b. Ecosystem structure, balance and principles of ecosystem sustainability
  - c. Biological energy relationships, including food chains and food webs
  - d. Biomass (ecological) pyramids
  - e. Biogeochemical (elemental) cycles - Nitrogen and Carbon
  - f. Biomes and life zones
  - g. Population dynamics - growth, J and S curves, fluctuation, carrying capacity
  - h. Biotic potential, environmental resistance (limiting factors) and competition
  - i. Adaptations to change, including natural and artificial selection
  - j. Biodiversity and extinction
  - k. Succession
2. Pesticides/Toxic Chemicals (not every semester)
  - a. Types of pesticides
  - b. Environmental problems - including biological magnification
  - c. Alternatives to pesticides
  - d. Toxic Wastes
3. Water
  - a. Hydrologic Cycle
  - b. Availability and distribution
  - c. Water pollutants, including nutrients and eutrophication
  - d. Water reclamation plants and other solutions
4. Energy Resources
  - a. Current energy sources - fossil fuels, hydroelectric power...
  - b. Nuclear power (only if time permits)
  - c. Renewable Energy - solar energy and other alternate energy sources - including geothermal, hydrogen, biomass and wind power
5. Air
  - a. Natural contaminants
  - b. Global pollution problems - global warming, acid deposition, CFC's & ozone
  - c. Major air pollutants
  - d. Solutions
6. Human Population
  - a. Population growth and projections
  - b. Malthusian Theory
  - c. Environmental impacts of burgeoning population
  - d. Contributing factors
  - e. Solutions/birth control
7. Economics, the Environment and the Future

### Course Objectives

	<b>Objectives</b>
Objective 1	Demonstrate an understanding of several fundamental concepts of ecology, environmental problems and conservation.
Objective 2	Explain several basic ecological principles.
Objective 3	Formulate solutions to reduce several major environmental problems.
Objective 4	Comprehend the heavy demands being placed on this planet's natural resources by human beings and be able to suggest alternatives for reducing our impact.
Objective 5	Demonstrate an understanding of the selection and implementation of natural resource management procedures based on ecological and economic criteria.

Objective 6	Demonstrate an understanding of the selection and implementation of natural resource management procedures based on ecological and economic criteria.
Objective 7	Apply principles learned in this course to their personal lives by independently developing methods for conserving resources.
Objective 8	Demonstrate an awareness of sound procedures for responding to potential environmental problems in personal and business arenas.

### Student Learning Outcomes

**Upon satisfactory completion of this course, students will be able to:**

Outcome 1	Examine environmental issues from an ecological perspective.
Outcome 2	Demonstrate an understanding of the environmental problems and assess the impact and role of human beings on this planet.

### Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Lecture	Lecture, with question and answer segments involving the students.

### Methods of Evaluation

Method	Please provide a description or examples of how each evaluation method will be used in this course.	Type of Assignment
College level or pre-collegiate essays		
Other	a. Prepare written responses to chapter and/or study guide questions as assigned b. Objective questions will be used on exams c. Answer essay questions that are included on some exams d. Evaluate fact-claims made and the nature of the reasoning from which they have been derived.	
Student participation/contribution		
Mid-term and final evaluations		
Tests/Quizzes/Examinations		
Group activity participation/observation		
Reading reports		
Written homework		

### Assignments

#### Other In-class Assignments

1. Take comprehensive notes during lecture
2. Practical examinations
3. Classroom discussions
4. In class quizzes and writing assignments.

#### Other Out-of-class Assignments

1. Read assigned chapters in textbook
2. As assigned, answer review questions at the end of each chapter or in study guide
3. Study and learn assigned vocabulary and concepts
4. Complete awareness assignments, such as: water use records and environmental news
5. Complete online based homework as assigned

#### Grade Methods

Letter Grade Only

## Distance Education Checklist

### Instructional Materials and Resources

### Effective Student/Faculty Contact

Which of the following methods of regular, timely, and effective student/faculty contact will be used in this course?

#### Within Course Management System:

Timely feedback and return of student work as specified in the syllabus  
Discussion forums with substantive instructor participation  
Chat room/instant messaging  
Private messages  
Online quizzes and examinations

### Other Information

#### COD GE

C1 - Natural Sciences

#### CSU GE

B2 - Life Science

#### IGETC GE

5B - Biological Science

### MIS Course Data

#### CIP Code

03.0101 - Natural Resources/Conservation, General.

#### TOP Code

011500 - Natural Resources

#### SAM Code

D - Possibly Occupational

#### Basic Skills Status

Not Basic Skills

#### Prior College Level

Not applicable

#### Cooperative Work Experience

Not a Coop Course

#### Course Classification Status

Credit Course

#### Approved Special Class

Not special class

#### Noncredit Category

Not Applicable, Credit Course

#### Funding Agency Category

Not Applicable

#### Program Status

Program Applicable

**Transfer Status**

Transferable to both UC and CSU

**Allow Audit**

No

**Repeatability**

No

**Materials Fee**

No

**Additional Fees?**

No

**Approvals****Course Control Number**

CCC000281015

**Programs referencing this course**

Early Childhood Education Teacher Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined/?key=130>)  
Early Childhood Education Site Supervisor Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined/?key=131>)  
Power Generation and Distribution (<http://catalog.collegeofthedesert.eduundefined/?key=139>)  
Desert Ecologist Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined/?key=150>)  
Field Ranger Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined/?key=151>)  
Desert Naturalist Certificate (<http://catalog.collegeofthedesert.eduundefined/?key=189>)  
Building Energy Systems Professionals (BESP) AS Degree (<http://catalog.collegeofthedesert.eduundefined/?key=202>)  
Environmental Science AS-T (<http://catalog.collegeofthedesert.eduundefined/?key=216>)  
Liberal Arts: Math and Science AA Degree (<http://catalog.collegeofthedesert.eduundefined/?key=29>)  
Geographic Information Systems Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined/?key=315>)  
Please delete (<http://catalog.collegeofthedesert.eduundefined/?key=344>)  
Agri-Business AS Degree (<http://catalog.collegeofthedesert.eduundefined/?key=46>)  
Environmental Horticulture AS Degree (employment preparation) (<http://catalog.collegeofthedesert.eduundefined/?key=47>)  
General Agriculture AS Degree (<http://catalog.collegeofthedesert.eduundefined/?key=49>)  
Turfgrass Management AS Degree (<http://catalog.collegeofthedesert.eduundefined/?key=50>)  
Natural Resources AS Degree (employment preparation) (<http://catalog.collegeofthedesert.eduundefined/?key=70>)  
Natural Resources AS Degree (transfer preparation) (<http://catalog.collegeofthedesert.eduundefined/?key=71>)  
Agriculture Office Professional Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined/?key=85>)  
Agriculture Technician Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined/?key=87>)  
Environmental Horticulture Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined/?key=90>)  
Agriculture Irrigation Technician Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined/?key=91>)  
Plant Science AS Degree (employment preparation) (<http://catalog.collegeofthedesert.eduundefined/?key=94>)  
Turfgrass Management Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined/?key=95>)