C-ID Descriptor
Introduction to Environmental Science

Descriptor Details

- **Descriptor Title**: Introduction to Environmental Science
- **C-ID Number**: 100
- **Units**: 3.0
- **Date of Last Revision**: 10/12/2017 04:44:19 PM PDT

General Description

Introduction to environmental issues from a scientific perspective, focusing on physical, chemical, and biological processes within the Earth system, the interaction between humans and these processes, and the role of science in finding sustainable solutions. Topics include ecological principles, biodiversity, climate change, sustainability, renewable and non-renewable energy, water resources, air and water pollution, and solid waste management.

Prerequisites

No information provided

Corequisites

No information provided

Advisories

Eligible for English Composition (C-ID ENGL 100)

Content

- Environmental Science and Sustainability

- Scientific Methodologies and the Role of Science
- Ecological Principles
- Resources and Resource Use
- Pollution and Its Environmental and Societal Impacts
- Addressing Environmental Issues and Sustainability

Course content should be based on core scientific principles, focusing on physical, chemical, and biological processes within the Earth system. The content above should include at a minimum: human populations, energy flow and biogeochemical cycles, biodiversity, climate change, sustainability, renewable and non-renewable energy, water resources, air and water pollution, and solid waste management.

Lab Activities

No information provided

Objectives

At the conclusion of this course, the student should be able to:

1. Identify and describe major global, regional, and local environmental issues.
2. Analyze the scientific basis of major environmental issues and identify and evaluate potential solutions.
3. Use scientific methodologies and explain how the scientific method is used to better understand environmental issues.
4. Analyze and interpret quantitative data and visual representations of data.
5. Show relationships between human actions and environmental issues and examine the impacts of environmental issues on human populations.

Evaluation Methods

Exams

Quizzes

Projects and/or research papers

Written and Problem Solving Exercises

Homework Assignments

Textbooks

Environment, Raven and Berg

Environment: The Science Behind the Stories, Withgott and Laposata

Environmental Science, Miller and Spoolman

Environmental Science a Global Concern, Cunningham and Cunningham

Environmental Science: Earth as a Living Planet, Botkin and Keller

Environmental Science for a Changing World, Houtman, Karr, and Interlandl

Environmental Science: Systems and Solutions; McKinney, Schock, Yonavjak

Environmental Science towards a Sustainable Future, Wright and Boorse