

U416-339: Environmental Conservation

Course Format: Online

Course Author/s: Irena Fraczek, M.A.

Course credits: 3

Pre/Corequisites: None; Recommended completion of U416-120 Global Physical Environments with a C or better or the equivalent; Appropriate for second-year or higher college students

Course Description:

This introductory course in environmental science explores issues arising during the interactions between the natural world (biosphere, atmosphere, hydrosphere, and lithosphere) and cultural world (demographics, economics, politics, and technology). Students examine such topics as air and water pollution, global climate change, energy alternatives and energy efficiency, solid and hazardous waste, loss of biodiversity, human health, food resources, effects of urbanization, and the management of public lands. Strong emphasis is placed on evaluating potential solutions to identified environmental problems.

Required Course Materials:

- *Living in the Environment*, 18th ed., by G. Tyler Miller, Jr. & Scott E. Spoolman (Pacific Grove, CA: Brooks/Cole-Thomson Learning, 2015). ISBN-13: 9781133940135

Hardware Requirements

You will need a webcam, speakers, and a microphone. You will complete your exams through an online proctor, requiring all three components.

Course Learning Objectives:

- Explain the scientific principles behind natural phenomena such as biodiversity, the flows of matter and energy, species interactions and climate change.
- Outline the effects of interconnectedness in nature - where changes in one part or aspect of the environment cause changes in other parts or aspects of the environment.
- Identify major threats to the sustainability of terrestrial and aquatic ecosystems as well as to the survival of individual species.
- Estimate the importance of environmental resources and environmental quality for human health and human economies.
- Summarize destructive human impacts on the environment (pollution, land degradation, depletion of environmental resources) and their underlying "root" causes.
- Compare a variety of worldviews and attitudes towards the environment and their influence on the major developments in environmental history.
- Outline the difficulties in enacting environmental laws or establishing environmental policy.
- Appraise your own ecological footprint and environmental worldview on the wide background of knowledge explored in this course.

Course Overview:

UNIT #	UNIT TOPIC	EVALUATED ACTIVITIES
1	Environmental Sustainability	Written Assignment
2	Matter, Energy and Ecosystems	Written Assignment
3	Biodiversity, Evolution, and Population Dynamics	Written Assignment
4	Terrestrial Biodiversity and Protection of Species	Written Assignment
5	Ecosystem Approach to Sustaining Terrestrial Biodiversity	Written Assignment
6	Sustaining Aquatic Biodiversity	Written Assignment
7	Water Resources and Water Pollution	Written Assignment
8	Human Population Growth	Written Assignment
Midcourse Exam		
9	Food Security and Food Production	Written Assignment
10	Mineral Resources and Nonrenewable Energy	Written Assignment
11	Energy Efficiency and Renewable Energy	Written Assignment
12	Biological Hazards and Air Pollution	Written Assignment
13	Climate Change and Ozone Depletion	Written Assignment
14	Solid and Hazardous Waste	Written Assignment
15	Urbanization, Economics and Sustainability	Written Assignment
16	Politics, Ethics and Sustainability	Written Assignment
Final Exam		

Evaluation Methods:

Your final grade will be based on your performance on the following:

- 1) Written Assignments (33.3%)
- 2) Exams (66.7%)

Written Assignments (33.3%)

Reading comprehension questions are assigned in each unit of this course and will cumulatively account for one-third or 33.3% of your final course grade.

Exams (66.7%)

A midterm and final exam, each worth one-third or 33.3% of your final grade will assess understanding of course content and will cumulatively account for two-thirds or 66.7% of your final course grade.

Exam Method: Online with Proctoring

This course requires all students to complete exams online with a proctoring service. Students receive two attempts on each exam. If you elect to take a second attempt, the average score of both exams will be recorded.

Grading Scale:

The following grading scale is used for evaluating all course requirements and determination of final grade earned:

A = 93-100	B = 83-87.9	C = 70-77.9	D = 60-69.9
AB = 88-92.9	BC = 78-82.9		F = Below 60

Pass/Fail Option

Students who enroll in an Independent Learning (IL) course under the pass/fail option will receive a final grade of S in place of a final grade equivalent to an A, AB, B, BC, or C and a final grade of U in place of a final grade equivalent to a D or F.