straighterline

Syllabus

ENV101 | **Introduction to Environmental Science**

Course Text

No need to track down a textbook; this text is provided digitally as part of the course enrollment:

Enger, Eldon, D., and Bradley F. Smith. *Environmental Science: A Study of Interrelationships*. 16th ed., McGraw-Hill Education, 2022.

Course Description

This course is designed to provide college-level students with an understanding of the fundamental concepts and principles of environmental science. Students will explore the interrelationships between humans and the environment, as well as the impact of human activities on ecosystems and natural resources.

Learning Outcomes

After completing this course, students will be able to:

1. Demonstrate an understanding of the interactions between living organisms and their environment
2. Examine and evaluate different perspectives on environmental issues
3. Define and describe the characteristics of various ecosystems, including communities, organism type, and organism distribution
4. Analyze and assess population characteristics, growth and decline factors, human impact on population dynamics, and sustainable management strategies
5. Analyze and assess ancient and modern energy sources and their impacts, and evaluate the sustainability of modern energy consumption patterns
6. Explain the characteristics and environmental impacts of nonrenewable and renewable energy sources, and be able to differentiate between the two
7. Demonstrate an understanding of biodiversity issues and their impact on ecosystems, and use that to evaluate land-use planning strategies for sustainable development
8. Analyze water management strategies, as well as evaluate the sources and impacts of air pollution, and the effectiveness of air quality management strategies
9. Interpret the main factors contributing to climate change, their impacts, and evaluate mitigation and adaptation strategies

Course Prerequisites

There are no prerequisites for Introduction to Environmental Science.

Academic Integrity Statement

Academic integrity is the pursuit of scholarly activity in an honest, truthful and responsible manner. Violations of academic integrity include, but are not limited to, plagiarism, cheating, fabrication and academic misconduct. Failure to comply with the Academic Integrity Policy can result in a failure and/or zero on the attempted assignment/examination, a removal from the course, disqualification to enroll in future courses, and/or revocation of an academic transcript.

Course Completion Policy

In order for a course to be considered complete, **all required coursework must be attempted, submitted, and graded.** Required coursework consists of graded assignments. Any Academic Integrity Policy violations may prevent a course from being considered complete.

Assessment Types

StraighterLine courses may include any combination of the assessment types described below. Review the descriptions to learn about each type, then review the Course Evaluation Criteria to understand how your learning will be measured in this course.

Benchmarks

Benchmarks test your mastery of course concepts. You have 3 attempts, and your highest score counts. **Note:** Cumulative Benchmarks (final exams) only allow 1 attempt.

Capstones

Capstones are project-based assessments that help you apply concepts to real-world scenarios. You have 2 attempts, and your highest score counts.

Checkpoints

Checkpoints are quick knowledge checks on important course concepts. All are open-book, and most have 1-3 attempts.

AI Use-Case Policies

StraighterLine Capstone assessments operate under one of three AI Use-Case Policies. These designations are selected intentionally to support learners in developing digital literacy, ethical reasoning, and authentic communication skills. Each model requires students to engage meaningfully with the course outcomes while adhering to academic standards.

Independent Work Requirement: Capstones with this designation must be completed independently without using AI tools. The goal is for learners to showcase their own understanding and skills without AI assistance. Students are expected to generate and submit original work developed solely through their own reasoning and effort.

AI-Assisted Planning Option: Capstones with this designation may allow AI tools to support brainstorming and assessment planning. If allowed, students will be asked to document any AI assistance by noting how it informed their work. Documentation must be included within the assignment or in a designated reflection field. Examples include describing how an AI tool helped organize an outline, generate ideas, or surface sources for further exploration.

AI-Integration Requirement: Capstones with this designation require AI tools as part of the learning process. Students will be asked to reflect upon their AI interactions and AI contributions to the assessment. Reflections must include which tools were used, how they were used, and what insights students gained from the process. This promotes transparency, ethical use, and metacognitive skill-building.

Course Evaluation Criteria

Your score provides a percentage score and letter grade for each course. A passing percentage is 70% or higher.

There are a total of 1000 points in the course:

Assessment	Points	Learning Outcomes
Checkpoint 1: Environmental Interrelationships	0	N/a
Benchmark 1: Introduction	10	1
Checkpoint 2: Environmental Ethics	0	N/a
Benchmark 2: Environmental Ethics	15	2, 9
Checkpoint 3: Matter, Energy, and Environment	0	N/a
Benchmark 3: Checkpoints 1-3	150	1, 2, 9
Checkpoint 4: Environments and Organisms	0	N/a
Benchmark 4: Interactions	15	2, 3, 7
Checkpoint 5: Kinds of Ecosystems and Communities	0	N/a
Benchmark 5: Ecosystems & Communities	15	1, 2, 3, 7
Checkpoint 6: Characteristics and Issues	0	N/a
Checkpoint 7: Energy and Civilization	0	N/a
Benchmark 6: Checkpoints 4-7	150	3, 6
Checkpoint 8: Nonrenewable Energy Sources	0	N/a
Checkpoint 9: Renewable Energy Sources	0	N/a
Benchmark 7: Resources	15	2, 5, 6
Checkpoint 10: Water Management	0	N/a
Benchmark 8: Checkpoints 8-10	150	2, 6
Checkpoint 11: Air Quality	0	N/a
Benchmark 9: Air Quality	15	2, 4, 8
Checkpoint 12: Climate Change	0	N/a
Benchmark 10: Climate Change	15	2, 9
Checkpoint 13: Solid Waste Management and Disposal	0	N/a
Checkpoint 14: Hazardous Substances and Wastes	0	N/a

Assessment	Points	Learning Outcomes
Benchmark 11: Checkpoints 11-14	150	2, 9
Benchmark 12: Checkpoints 1-14	300	1-9
Total	1000	

Course Roadmap

This roadmap provides an overview of the checkpoints and lessons covered in this course.

Checkpoint 1: Environmental Interrelationships

- Checkpoint 1 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 1
- Chapter 1 Presentation

Checkpoint 2: Environmental Ethics

- Checkpoint 2 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 2
- Chapter 2 Presentation

Checkpoint 3: Matter, Energy, and Environment

- Checkpoint 3 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 4
- Chapter 4 Presentation

Checkpoint 4: Environments and Organisms

- Checkpoint 4 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 5
- Chapter 5 Presentation

Checkpoint 5: Kinds of Ecosystems and Communities

- Checkpoint 5 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 6
- Chapter 6 Presentation

Checkpoint 6: Characteristics and Issues

- Checkpoint 6 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 7
- Chapters 7 & 8 Presentation

Checkpoint 7: Energy and Civilization

- Textbook Reading Assignment: Chapter 8
- Chapters 7 & 8 Presentation

Checkpoint 8: Nonrenewable Energy Sources

- Checkpoint 8 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 9
- Chapters 9 & 10 Presentation

Checkpoint 9: Renewable Energy Sources

- Textbook Reading Assignment: Chapter 10
- Chapters 9 & 10 Presentation

Checkpoint 10: Water Management

- Checkpoint 10 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 15
- Chapter 15 Presentation

Checkpoint 11: Air Quality

- Checkpoint 11 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 16
- Chapter 16 Presentation

Checkpoint 12: Climate Change

- Checkpoint 12 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 17
- Chapter 17 Presentation

Checkpoint 13: Solid Waste Management and Disposal

- Checkpoint 13 Pre-Reading: What Do You Think?
- Textbook Reading Assignment: Chapter 18
- Chapters 18 & 19 Presentation

Checkpoint 14: Hazardous Substances and Wastes

- Textbook Reading Assignment: Chapter 19
- Chapters 18 & 19 Presentation

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