

Brief Course Outline

Course Title: Environmental Science and Sustainability

Course Number and Section:

ENVIRSCI

1021G 551

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Disclaimer: Information in the brief course outline is subject to change. The syllabus posted on OWL is the official and authoritative source of information for the course.

Course Description:

This course is intended to give you the scientific background and skill set required to think critically about emerging environmental issues (e.g., climate change, loss of pollinators, air pollution, etc.). The course focuses on the practical and applied aspects of environmental science through studying environmental problems in terms of their causes, assessment, and solutions. We will tackle the most pressing environmental issues including the loss of biodiversity, food provision and security, water security, supply and pollution, plastic waste, air pollution, the mining and oil industry, sustainable development, energy production, and climate change. Throughout the course, students will apply their foundational knowledge to work through case studies based on current issues and learn about strategies that are used to mitigate and manage topical issues of environmental concern.

Learning Outcomes:

- Environmental knowledge - Summarize a range of pressing environmental problems, identify their causes and consequences and discuss possible solutions;
- Environmental awareness - Appreciate, value and respect the environment and the role of society in it, along with the diverse viewpoints and perspectives of stakeholders;
- Scientific literacy - Identify the validity of scientific sources, synthesize and critically analyze the existing literature on environmental topics, interpret graphical representations of data;
- Scientific writing - Apply practical skills in scientific writing to convey detailed information about an environmental topic and incorporate feedback.

Textbooks and Course Materials:

Interactive Course Notes

We are using a set of interactive course notes developed specifically for ES1021 in place of a textbook. The notes include YouTube videos, interactive data visualizations, embedded links to websites, short video lectures, mini-applications and more. In several places, you will be interacting directly with environmental data and asked to make your own inferences about environmental issues. It is important to note that it is your responsibility to read the course notes before attending lecture as we will not explicitly discuss all of this information during lecture.

Methods Of Evaluation:

Assignment	Due Date mm/dd/yy	Weight - %
Online quizzes (weekly)		10
Midterm	03/10/25	15
Final Exam		35
Annotated bibliography	01/20/25	10
Mini-review	02/24/25	20
Response-to-reviewer	03/31/25	10

In solidarity with the Anishinaabe, Haudenosaunee, Lūnaapéewak, and Chonnonton peoples on whose traditional treaty and unceded territories this course is shared.

Saturday, December 7, 2024