

THE ENVIRONMENT

GEOG/ENST 1170 Fall 2022

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Description

Current environmental issues will be examined using a geographical approach that stresses the interrelationships between environments and societies. The major physical and societal components of the earth/atmosphere system will be introduced to provide a base for the understanding of the nature and development of modern environmental concerns. Often these concerns are not completely new but have evolved over decades or even centuries. The histories, characteristics, and impacts of specific problems will be examined in detail and potential solutions will be evaluated through exploration of perspectives including technology, politics, economics, and planning and management.

Course Textbook

Dearden, Philip, Bruce Mitchell, and Erin O’Connell (2020). *Environmental Change and Challenge (6th Edition)*, Oxford University Press, Don Mills, Ontario, Canada.

Students will be assigned readings from the text to complete *before each lecture*.

Evaluation Scheme

Lab Exercises	40%	Weekly
Term Test 1	13%	October 17
Term Test 2	13%	November 14
Participation	8%	
Final Exam	26%	TBA

Participation opportunities will be described in class. There will be weekly lab exercises, two term tests, and a final examination. All tests will be administered in person.

Lecture Times

Mondays and Wednesdays: 5:30 – 7:00 pm, ATAC 1003

Schedule of Topics (subject to changes as necessary)

Date	Reading	Topic
September 7		Introduction
September 12	Chapter 1	Management and Sustainability
September 14	Chapter 2	Responding to Global Change
September 19	Chapter 3	Energy and Ecosystems
September 21	Chapter 3	Biodiversity
September 26	Chapter 4	Ecological Succession
September 28	Chapter 4	Ecosystem Change
October 3	Chapter 5	Biogeochemical Cycles
October 5	Chapter 5	Disrupted Cycles
October 10		Study Week
October 12		Study Week
October 17		Term Test 1
October 19	Chapter 6	Implications for Management
October 24	Chapter 7	Adaptive Management
October 26	Chapter 8	Climate Change
October 31	Chapter 8	Climate Impacts and Adaptation
November 2	Chapter 8	Climate Mitigation and Policy
November 7	Chapter 9	Ocean Ecosystems
November 9	Chapter 9	Ocean Management
November 14		Term Test 2
November 16	Chapter 10	Forests and Harvests
November 21	Chapter 10	Forest Management
November 23	Chapter 11	Agriculture
November 28	Chapter 11	Sustainable Food Production
November 30	Chapter 12	Water
December 5	Chapter 12	Water Resource Management

Learning Outcomes

Knowledge

- Understand the basics of ecosystem relationships and succession
- Follow the energy flows through ecological systems and the hydrosphere, lithosphere, and atmosphere
- Connect the relationships between ecological systems and the exploitation of natural resources, including ocean, forest, agricultural, mineral, and water resources
- Consider political and economic restraints on current systems and implications for change
- Apply these principles to current issues and case studies in Canada and around the world

Skill Development

- Tracing through the major biogeochemical cycles and analysis of the consequences of various disruptions to these cycles
- Evaluation of practices for managing environmental impacts
- Application of sustainable development principles to environmental systems

Course Delivery

In accordance with the safety protocols at Lakehead University in Fall 2022, this course will be delivered in-person. The primary mode of contact will be lectures during the scheduled time periods each week. It is possible that this will change if circumstances warrant.

Course materials will be delivered through the **Desire2Learn** platform at MyCourseLink.

Lab exercises will be conducted in person when and where possible. Schedules and outlines of lab activities will be made available by the Lab Instructors.

LU Accommodation Statement

Lakehead University is committed to achieving full accessibility for persons with disabilities/medical conditions. Part of this commitment includes arranging academic accommodations for students with disabilities/medical conditions to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability/medical condition and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please email sas@lakeheadu.ca or visit <https://www.lakeheadu.ca/faculty-and-staff/departments/services/sas>.