ORIGINAL COURSE IMPLEMENTATION DATE: September 1993
REVISED COURSE IMPLEMENTATION DATE: September 2025
COURSE TO BE REVIEWED (six years after UEC approval)**:** February 2031
Course outline form version: 26/01/2024

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: ENV 111	**Number of Credits:** 3 Course credit policy (105)
Course Full Title: Environmental Issues and Strategies **Course Short Title:** Environ Issues & Strategies	
Faculty: Faculty of Science	**Department (or program if no department):** Planning, Geography, and Environmental Studies

Calendar Description:

Basic science, traditional ecological knowledge, and other ways of knowing are used to better understand the influences of human activities on the global and local environments, employing the framework of sustainable development to assess current and emerging strategies that will lead to the reduction of human harm to the natural and built environments.

Note: Field trips outside of class time may be required. Please refer to the department website for field trip scheduling information.

Note: Students with credit for GEOG 111 cannot take this course for further credit.

Prerequisites (or NONE):	None.
Corequisites (if applicable, or NONE):	None.
Pre/corequisites (if applicable, or NONE):	None.

Antirequisite Courses *(Cannot be taken for additional credit.)*

Former course code/number: GEOG 111

Cross-listed with:

Equivalent course(s):

(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)

Typical Structure of Instructional Hours

Lecture/seminar	20
Tutorials/workshops	20
Experiential (field trip)	5
Total hours	**45**

Scheduled Laboratory Hours

Labs to be scheduled independent of lecture hours: ☒ No ☐ Yes

Course Details

Special Topics course: **No**

(If yes, the course will be offered under different letter designations representing different topics.)

Directed Study course: **No**

(See policy 207 for more information.)

Grading System: **Letter grades**

Delivery Mode: **May be offered in multiple delivery modes**

Expected frequency: **Annually**

Maximum enrolment (for information only)**: 36**

Prior Learning Assessment and Recognition (PLAR)

PLAR is available for this course.

Transfer Credit *(See **bctransferguide.ca**.)*

Transfer credit already exists: **Yes**

Submit outline for (re)articulation: **Yes**

(If yes, fill in transfer credit form.)

Department approval	**Date of meeting:**	September 10, 2024
Faculty Council approval	**Date of meeting:**	October 4, 2024
Undergraduate Education Committee (UEC) approval	**Date of meeting:**	February 28, 2025

Learning Outcomes *(These should contribute to students' ability to meet program outcomes and thus Institutional Learning Outcomes.)*

Upon successful completion of this course, students will be able to:

1. Analyze relationships between global environmental change and human population, urbanization, and agriculture.
2. Compare western scientific approaches to traditional ecological knowledge and other world views in understanding and resolving environmental issues.
3. Identify situations where different scientific and social scientific data collection methods and techniques are most useful in developing environmental research project.
4. Reflect on the ethical issues associated with the collection, analysis, and utilization of data, including traditional ecological knowledge of Indigenous communities.
5. Integrate field observations and data collection into a group project on local environmental change.
6. Utilize both social science and natural science approaches in explaining the cause of, and solutions to, current environmental problems.
7. Work collaboratively with other students and other stakeholders in advocating new strategies for improving environmental sustainability at a local scale.

Recommended Evaluation Methods and Weighting *(Evaluation should align to learning outcomes.)*

Quizzes/tests:	25%	Assignments:	25%	Project:	25%
Holistic assessment:	15%	Field evaluation:	10%		%

Details:

Quizzes/tests: 5 module tests and 2 snap quizzes (25%)
Assignments: seminar discussion and exercises (25%)
Project: citizen science group project on climate challenge and Abbotsford Tourism (25%)
Holistic assessment: reflection journal (15%)
Field evaluation: field trip with report (10%)

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Instructional Methods *(Guest lecturers, presentations, online instruction, field trips, etc.)*

Problem-based learning, lectures, in-class seminar exercises and fieldwork, student presentations.

Texts and Resource Materials *(Include online resources and Indigenous knowledge sources. Open Educational Resources (OER) should be included whenever possible. If more space is required, use the Supplemental Texts and Resource Materials form.)*

	Type	Author or description	Title and publication/access details	Year
1.	Textbook	Miller, T, Spoolman, S., and D. Andrews-Brown	Environmental Science, 17th edition	2025
2.	Online resource	Government of BC	BC Climate Action Toolkit	2023
3.	Textbook	James Speight	The Science and Technology of the Environment	2023
4.	Journal	Nature Magazine Editorial Board	The Rise of the Citizen Scientist. Nature August 18	2015
5.	Textbook	Melissa K. Nelson and Daniel Shilling	Traditional Ecological Knowledge: Learning from Indigenous Practices for Environmental Sustainability	2022

Required Additional Supplies and Materials *(Software, hardware, tools, specialized clothing, etc.)*

Course Content and Topics

Example 1:

- Introduction to the course
- Module 1: Climate change: the issues, the science, and the strategies. Topics include the scientific method, uncertainty and risk, traditional ecological knowledge, different world views, IPAT equation, citizen science.
- Module 2: Ecosystems and economics. Topics include Energy, Matter, Bioregionalism, Social connectivity, Conservation of biological resources, Invasive species, Forestry.
- Module 3: Human population, cities, and community development. Topics include fertility rates, Gender, BC population histories, Greening the cities, sustainability.
- Module 4: Air, water, land: resource management and pollution. Topics include the atmosphere, the hydrologic cycle, soil formation, air pollution, water pollution, soil pollution, sound, and light pollution.
- Module 5: Food, agriculture, industries, and other human activities. Topics include Food production, food security, and farm-level adaptations.
- Student presentations and course wrap-up

Example 2:

- Introduction to course, key concepts: climate change, vulnerability, risk, and adaptation
- The science of climate change; the hydrological cycle; invasive species
- Bioregionalism; social connectivity and capacity for change
- BC population histories and suburban environmental change
- Science and uncertainty; risk analysis; field techniques and ethics in data collection
- Mapping change: GIS and citizen science activism; mapping lab
- Water forecasting and pollution; field techniques
- Sustainable development; field techniques
- Food security; thesis statement development
- Food production and farm-level adaptation to climate changes
- Traditional ecological knowledge and climate adaptability
- Urbanization, infrastructure, and climate preparedness
- Greening the city from the inside out
- Group presentations; summary of course themes and ideas