ORIGINAL COURSE IMPLEMENTATION DATE: May 2014
REVISED COURSE IMPLEMENTATION DATE: January 2023
COURSE TO BE REVIEWED (six years after UEC approval)**:** June 2028
Course outline form version: 09/08/2021

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

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

Course Code and Number: GEOG 103	**Number of Credits:** 4 Course credit policy (105)
Course Full Title: The Physical Environment **Course Short Title:**	
Faculty: Faculty of Science	**Department:** School of Land Use and Environmental Change

Calendar Description:

A exploration of Earth's physical processes that shape the natural environment. Interconnections between the atmosphere, hydrosphere, lithosphere, and biosphere are used to assess the Earth's surface and the interplay between humans and the physical environment.

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 101 or GEOG 102 cannot take this course for further credit.

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

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

Former course code/number:

Cross-listed with:

Equivalent course(s): GEOG 101 or GEOG 102

(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	45
Supervised labroratory hours (science lab)	45
Experiential (field trip)	
Total hours	**90**

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: **Every semester**

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

Prior Learning Assessment and Recognition (PLAR)

PLAR is available for this course.

Yes

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:** May 6, 2022
Faculty Council approval	**Date of meeting:** May 13, 2022
Undergraduate Education Committee (UEC) approval	**Date of meeting:** June 17, 2022

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. Describe the scientific method and how it applies to studies of Earth's physical environment.
2. Use geologic time to date major events associated with the evolution of the physical environment.
3. Trace energy exchanges between Earth's surface and the atmosphere driving weather and climate.
4. Articulate how atmospheric conditions create the possibility of extreme weather and climatic events.
5. Apply the theory of plate tectonics to explain mountain building, earthquakes, volcanoes, and their associated hazards.
6. Explain geomorphic processes that have shaped the physical environment.
7. Explain the importance and connections of ecosystem function to biodiversity.
8. Identify and reflect upon human impacts on Earth's physical environment.
9. Demonstrate how physical geography and Indigenous knowledge can work in tandem to build an understanding of landscape evolution.
10. Demonstrate competent use of topographic maps, geographic positioning systems, Google Earth, and weather instruments.
11. Apply quantitative analysis to interpret environmental data.

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

Lab work:	40%	Quizzes/tests:	25%	%
Final exam:	25%	Assignments:	10%	%

Details: The lab portion typically includes lab assignments and exams. Students must pass both the lecture and lab to pass the course.

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

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	Christopherson, R.W., Birkeland, G.H., Byrne, M-L, and Giles, P.	Geosystems: An introduction to physical geography, Updated Fourth Canadian Edition	2020
2.	Textbook	Gervais, B.	Living Physical Geography	2019
5.	Online resource			

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

A laboratory manual and required topographic map(s) available at the UFV Bookstore.

Course Content and Topics

Typical lecture/discussion topics include:

1. Introduction to physical geography and the scientific method
2. Visualization and spatial analysis of Earth's surface
3. Geologic time and dating methods
4. Atmospheric energy budgets
5. Atmospheric and oceanic circulation
6. The hydrological cycle
7. Weather and climate change
8. Plate Tectonics and mountain building
9. Earthquakes, volcanoes, and landslides
10. Physical and chemical weathering of earth's surface
11. Sediment transport and deposition resulting landforms: rivers, coasts, glaciers, and deserts
12. Soil forming processes and the ecological function of soil
13. Ecosystems and biodiversity including Indigenous use of fire to management ecosystem fuction

Typical laboratory exercises include:

1. Introduction to Earth's surface and techniques used in physical geography
2. Radiation, energy balance, and temperature variation
3. Atmospheric humidity and energy transfer
4. Weather maps
5. Mapping skills: scale and location
6. Mapping skills: topographic profiles, gradients, and Google Earth
7. River processes and landforms
8. Coastal processes and landforms
9. Glacial processes and landforms
10. Soil development and biogeography
11. Global Positioning Systems (GPS) navigation
12. Natural hazards
13. Field-data collection and interpretation