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United Nations Institute for Training and Research

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CIFAL Victoria - Climate Science BSc (Combined program of Geography and Earth and Ocean Sciences)

People

Deadline: 9 Jan 2025

Type:	Course
Location:	Victoria , Canada
Date:	1 Jan 2025 to 31 Dec 2025
Duration:	12 Months
Programme Area:	Decentralize Cooperation Programme
Website:	https://www.uvic.ca/about-uvic/cifal/index.php
Price:	\$0.00
Event Focal Point Email:	geogchair@uvic.ca
Partnership:	CIFAL Victoria

BACKGROUND

There is a large demand for adaptation solutions that are informed with solid climate science supported by big-data analytical skills, delivered by students who have already been trained to engage directly with external, non-academic partners.

EVENT OBJECTIVES

Providing undergraduate students with a foundation in climate science and the tools to work in the climate services sector (at the interface of climate science and climate solutions)

LEARNING OBJECTIVES

Program Specific

- 1. Interpret and critically assess the science spanning the scope of the Intergovernmental Panel on Climate Change reports*
- 2. Understand and quantify processes (including feedbacks) in the climate system*
- 3. Understand past/present/future changes of climate (natural and anthropogenic)*
- 4. Build, use, and analyze models of the climate system*
- 5. Understand the nature of climate impacts and potential solutions in the context of UN development goals*
- 6. Experience how data are collected in the field and analyzed in the lab*
- 7. Use community engagement strategies to identify vulnerabilities and acceptable climate adaptation strategies*
- 8. Consider what types of data are required for specific types of climate impact analyses and how to manipulate widely disparate data types using appropriate software (including GIS)*
- 9. Engage with stakeholders to analyze climate change impacts and solutions*
- 10. Communicate climate change information to a broad range of audiences*
- 11. Pursue further education in leading climate science (and related) graduate programs*

General Transferrable Skills

- 1. Data analysis/visualization*
- 2. Computing skills*
- 3. Quantitative reasoning*
- 4. Critical thinking*
- 5. Communication*
- 6. Indigenous cultural acumen*

7. *Professional practice/ethics*
8. *Fundamental scientific literacy*
9. *Translation of science/data into societal actions*

As with other undergraduate programs, offering the program was subject to the approval of the Provincial ministry and outcomes are regularly assessed.

CONTENT AND STRUCTURE

The program is designed for undergraduate BSc students, starting from a common foundation in basic sciences (chemistry, math, and physics).

METHODOLOGY

The program is delivered in a format similar to other BSc programs. Among its more unique features are the fact that it contains two distinct streams (Physical Climate Science and Impacts, Adaptation and Mitigation) and a project-based capstone course required of both streams:

GEOG489 - Climate Solutions

Identification of a specific climate change issue in partnership with community and/or research organization partners, followed by evaluation of climate change vulnerabilities and potential adaptation/mitigation strategies using skills in data processing and knowledge of climate change information. Culminates in oral presentation and written product for community partners.

TARGETED AUDIENCE

Undergraduate students. Diversity of participating students is strongly encouraged.