



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



 : 9 1<sup>st</sup> 2025

	:	Course
	:	Victoria , Canada
	:	1 1 <sup>st</sup> 2025 to 31 12 <sup>th</sup> 2025
	:	12 Months
	:	Decentralize Cooperation Programme
	:	<a href="https://www.uvic.ca/about-uvic/cifal/index.php">https://www.uvic.ca/about-uvic/cifal/index.php</a>
	:	US\$0.00
	email:	geogchair@uvic.ca
	:	CIFAL Victoria



*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.*



*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)*



#### *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.



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



*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.*



*Undergraduate students. Diversity of participating students is strongly encouraged.*