UNIVERSIDAD CATÓLICA DE TEMUCO | EDUCACIÓN CONTINUA

CURSOS
DIPLOMADOS
POSTÍTULOS

IN-PERSON COURSE

CLIMATE CHANGE IN SOUTHERN CHILE AND PATAGONIA

Natural laboratories for global challenges

2-13 NOVEMBER 2026

Temuco · 80 hours

AN IMMERSIVE EXPERIENCE IN THE ANDES

Southern Chile and Patagonia are exceptional natural laboratories for studying the effects of climate change.

The Andes of south-central Chile reveal transformations associated with glacier retreat, climate variability, and high-mountain ecosystem responses. The course integrates ecology, climatology, remote sensing, and field-based learning to examine these processes across spatial and temporal scales.

FOUR CONFIRMED FIELD SITES

Pichillancahue-Turbio glacier sector.
Puerto Saavedra.
Pehuenco Alto.
Valdivian forest.

LEARNING PURPOSE

GENERAL OBJECTIVE

Develop scientific and technical competencies to analyze the environmental manifestations and consequences of climate change in southern Chile and Patagonia, using Andean ecosystems as natural laboratories.

SPECIFIC OBJECTIVES

01 **Understand** the foundations of climate change and its climatic, hydrological, glaciological, and ecological manifestations.

02 **Analyze** glacier retreat, environmental transformations, and vegetation responses in Andean ecosystems.

03 **Apply** environmental monitoring, remote sensing, GIS, and uncrewed aircraft to the study of ecological and territorial change.

04 **Integrate** climatic, ecological, and spatial information to communicate results and develop research or monitoring initiatives.

INTENDED FOR · Graduate students, early-career researchers, public-sector professionals, NGOs, environmental consultants, higher-education professionals, and science communicators.

LEARNING PATH · MODULES 1-3

1

Southern Hemisphere climate system

Climate-system foundations, regional patterns, watershed responses, glaciers, and water security.

CLIMATE · WATERSHEDS · GLACIERS · MOUNTAIN ECOSYSTEMS

2

Ecosystems, biodiversity, and restoration

Temperate forests, resilience, postglacial succession, and nature-based restoration strategies.

FORESTS · VEGETATION · SUCCESSION · RESTORATION

3

Environmental monitoring and technologies

Tools for characterizing territorial change using field information, satellite imagery, and spatial analysis.

GIS · REMOTE SENSING · DRONES · QGIS · GOOGLE EARTH ENGINE

LEARNING PATH · MODULES 4-6

4

A vulnerable territory

Interactions among volcanism, mass movements, glacier retreat, active tectonics, and coastal evolution.

VOLCANOES · GLACIERS · HAZARDS · TERRITORY

5

Climate adaptation, mitigation, and governance

Climate policies and responses from territorial and Global South perspectives.

ADAPTATION · MITIGATION · PUBLIC POLICY · GOVERNANCE

6

Science communication and integrative project

Public communication of science and development of an applied research, monitoring, or territorial action proposal.

COMMUNICATION · FINAL PROJECT · COLLABORATION

FACULTY AND METHODOLOGY

Dra. Angélica Casanova Katny

Plant ecology, climate change, and Andean ecosystems.

Dr. Miguel Aguayo Arias

Hydrology and climate variability.

Dra. Rebeca Martínez

Watershed hydrology and aquatic systems.

Dra. Rosa Reyes Riveros

Landscape ecology and territorial planning.

Dr. Claudio Tapia Orellana

Geology and past and present climate change.

Dr. Jimmy Pincheira

Regional vegetation and biodiversity.

Dr. David Fonseca Luengo

Remote sensing, GIS, and land-use change.

Dr. Haroldo Lledó Vásquez

Geology and past and present climate change.

Dr. Celso Navarro Cárcamo

Native forests and remote sensing.

METHODOLOGY

Lectures · Case analysis · Practical activities · Fieldwork · Remote sensing and GIS · Final integrative project

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INFORMATION AND REGISTRATION

DATES AND FORMAT

2-13 November 2026

In person · 80 hours · 20 places · Spanish and English
Monday to Friday, 8:30 a.m.–6:00 p.m.
San Juan Pablo II Campus, UC Temuco
UCT certificate stating the credits earned
Field sites: Pichillancahue-Turbio · Puerto Saavedra
Pehuenco Alto · Valdivian forest

APPLICATION

Professional or bachelor's degree in a related field.
Motivation letter of up to 300 words.
Current CV of up to three pages.

FEES

Registration: CLP 80.000
Tuition: CLP 650.000
Total: CLP 730.000
Payment due by 15 October 2026.

TUITION INCLUDES LOGISTICS FOR FIELD ACTIVITIES

20% discount for UC Temuco alumni · 2 interest-free installments · discounts cannot be combined

CONTACT

COURSE COORDINATION
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REGISTRATION
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DEPARTMENT OF ENVIRONMENTAL SCIENCES
FACULTY OF NATURAL RESOURCES

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