


# UE Lautaret field workshop: snow & atmosphere interface

 ECTS  
6 credits

 Component  
UFR PhITEM  
(physique,  
ingénierie, terre,  
environnement,  
mécanique)

 Semester  
Printemps

- > **Teaching language(s):** French
- > **Teaching type:** Field trips
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** PAX8ACAB

## Presentation

### Description

Snow is a critical component of the Earth climate system. It is a singular interface between the atmosphere and the soil, where occur intense exchanges of mass (water/ice), energy (radiative, turbulent), and chemical species (N, ...). It plays a major role in the hydrology of mountainous areas (water resource), in ecology, in the thermal regime of soil (permafrost), ...

The training "neige et atmosphère au Lautaret" aims to observe the Alpine snow and the atmosphere from various perspectives: surface mass and energy budget, snow, thermal regime, chemistry. The objective is to acquire new knowledge on snow and associated issues, as well as technical and experimental skills.

This training is based on autonomy and active pedagogy. You will work in group of 3 persons and use "research-grade" instruments and techniques, process your data in order to eventually produce elaborated scientific results that will be present as posters.

The program comprises the following topics:

- snow depth mapping (GPS, GPR, 2x 0.5 day)
- snow stratigraphy in snowpits, snow metamorphism (2x 0.5 day)
- snow thermal regime (0.5 day).

- snow albedo and surface energy budget, micro-meteorology (0.5 day).
- atmospheric ozone (0.5 day).
- snow optics (0.5 day).
- data processing and interpretation (0.5 day)

This training is open to a few international students and professionals (Master, PhD) every year, depending on the number of UGA students.

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## Course parts

TERRAIN	Terrain	36h
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## Recommended prerequisites

basis in physics of the environment

**Period :** Semester 8

## Useful info

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### Contacts

Program director

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### Place

> Grenoble

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### Campus

> Grenoble - Saint-Martin d'Hères