

# UE Climate change

 ECTS  
6 credits

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

 Semester  
Automne

- > **Teaching language(s):** English
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** PAX9SRAH

## Presentation

### Description

This course is given in English (or in French if all students are french speaking).

The course is a physical approach of the climatic change at the global level, in line with the Working group I of the IPCC .

The lectures (about 33-36h) give an overview of climate change causes and mechanisms at the global level. They are given by researchers of the IGE laboratory (\*\*), and some visitors if any. Topics covered by these lectures are the following (they may slightly change depending on researchers availability):

- A global view of the surface warming, and its relationship with climatic forcings;
- Climatic sensitivities; scenarios of future warming;
- Extreme climatic events;
- Paleoclimatic variations and what they tell us on mechanisms;
- Modelling climate, from 1D to 3D models;
- A regional model, application to the mountain climate.

Students have a practical project to discuss a dataset, with the goal to get some grasp on what the data can tell us, their uncertainty, bias, etc. Outputs are both a written and an oral presentations of the results.

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## Course parts

CMTD	Lectures (CM) & Teaching Unit (UE)	42h
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## Useful info

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### Campus

› [Grenoble - University campus](#)