

# UE Changement climatique / Climate change



Niveau d'étude  
Bac +5



ECTS  
6 crédits



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



Période de  
l'année  
Automne (sept.  
à dec./janv.)

- > **Langue(s) d'enseignement:** Français, Anglais
- > **Ouvert aux étudiants en échange:** Oui
- > **Code d'export Apogée:** PAX9SRAH

## Présentation

### 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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## Heures d'enseignement

UE Changement climatique- CM/TD

Cours magistral - Travaux dirigés

42h

**Période** : Semestre 9

## Infos pratiques

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### Campus

› [Grenoble - Domaine universitaire](#)