

# UE Modelling and numerical simulations



Level  
Baccalaureate  
+4



ECTS  
3 credits



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



Semester  
Printemps

- > **Teaching language(s):** English
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** PAX8NQAD

## Presentation

### Description

**Goal:** Because numerical tools in nowadays science research has become unavoidable, this course aims in familiarizing with methodologies, Python language and algorithms, ranging from classical to quantum physics, when the use of the numerics is inevitable to get answers to a problem.

**Content:** Based on independent projects starting on day one and possibly related to the different topics encountered during their master, the students will have to do an A to Z study, developing their own model, implementing it in Python with an appropriate approach, benchmarking it by understanding pros and cons and eventually doing the physical analysis.

### Course parts

UE Modeling and numerical simulations - CMTD

Projet tutoré

24h

**Period :** Semester 8

## Useful info

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## Campus

- Grenoble - Saint-Martin d'Hères
- Grenoble - University campus