

Modelling & Scientific Computing



ECTS
4 crédits



Hourly volume
73h

Introducing

Description

Objectives

At the end of this module, the student will have understood and be able to explain (main concepts):

- How to model a problem in physics, biology, economics, etc. using a system of ode or pde
- How to numerically solve such a problem in simple cases

The student should be able to:

- model a problem via ode or pde
- classify problems according to their mathematical structure and choose appropriate numerical methods of solution
- implement (in PYTHON or JULIA) these numerical methods

Necessary prerequisites

Undergraduate courses in analysis and linear algebra.
Basics of Physics
PYTHON language

Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

Practical info

Location(s)

 Toulouse