Modelling & Scientific Computing

ECTS
4 crédits

Hourly volume
73h

Location(s)

Toulouse

Introducing

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

Practical info