# Variational methods applied to modelling

Level
Baccalaureate +4

Component
UFR IM2AG (informatique, mathématiques et mathématiques appliquées)

Semester
Printemps

- **Teaching language(s):** English
- **Open to exchange students:** Yes
- **Code d'export Apogée:** GBX8AM11

# Presentation

## Description

Content

This course include practical sessions.

## Objectives

The aim of this course is to get deep knowledge of PDE modelling and their numerical resolution, in particular using variational methods such as the Finite Elements method.

## Course parts

| | | |
|---|---|---|
| Lectures | Lectures (CM) | 16,5h |
| Tutorials | Tutorials (TD) | 16,5h |

## Recommended prerequisites

notions of distribution theory, linear algebra, integral calculus, some notions of programming in some high level language, basic numerical analysis, as numerical integration of differential equations, basic notions on Hilbert spaces, usual partial differential operators (gradient, divergence, laplacian…)

# Useful info

## Contacts


### Program director

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## Campus

- Grenoble - University campus