UE Numerical methods in solid and fluid mechanics 2

Niveau d'étude
Bac +4

ECTS
3 crédits

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

Période de l'année
Printemps (janv. à avril/mai)

- **Langue(s) d'enseignement:** Anglais
- **Ouvert aux étudiants en échange:** Oui
- **Code d'export Apogée:** PAX8MEAC

Présentation

Description

This second part of the course introduces students to finite difference methods as a means of solving different type of differential equations that arise in fluid dynamics.
Fundamentals of numerical analysis, ordinary differential equations and partial differential equations related to fluid mechanics and heat transfer will be reviewed.
Error control and stability considerations are discussed and demonstrated.
A simple code using the finite difference method will be developed, tested and used on a one-dimensional partial differential equations.

Heures d'enseignement

UE Numerical methods in solid and fluid mechanics 2 - CM	CM	5h
TP	TP	9h
TD	TD	10h

Période : Semestre 8

Infos pratiques

Lieu(x) ville

- Grenoble

Campus

- Grenoble - Domaine universitaire