SCIENCE, TECHNOLOGY, HEALTH

M2 Mathematics, Modeling and Simulation (MMS)

Master Mathematics and Applications

ECTS
60 credits

Duration
1 year

Component
Collège Sciences et Technologies pour l'Energie et l'Environnement (STEE)

Language(s)
English

Presentation

Apply here from October to March

Check our FAQ HERE

The program offers up-to-date knowledge in areas of applied mathematics related to modeling with partial differential equations.

Objectives

This program aims to provide solid skills in applied mathematics (partial differential equations analysis, numerical analysis, scientific computing and high-performance computing, and optimization).

- Courses focus on applications in industrial problems, fluid mechanics, waves propagation, and optimal design,...
- This program prepares students for leading positions in private and public organizations in research and development departments.

Your university

Skills

At the end of this program, the students in "**Mathematics, Modeling, and Simulation Master's degree**" will be able to:

- Elaborate and analyze mathematical models arising from physics, biology, geology, industry,
- Elaborate and analyze numerical schemes,
- Develop, adapt, and use industrial or research numerical simulation software.

Additional information

Scholarships

- EIFFEL Scholarship of Excellence
- Talents' Academy Grants
- Catalogue des Bourses Campus France

The International Master Programs Admission Office

master.programs@univ-pau.fr

Organisation

Organization

Advanced Analysis	
Mathematical Engineering of deep learning	
ELECTIVES 2	
French or English as a foreign language	
SEMESTER 2	
Integrator project	
Internship from 5 to 6 months	

Course Title	
Analysis of PDE	6
Numerical Analysis of PDEs	6
	4
Finite Volume Methods for Hyperbolic Systems	4
Scientific computing	4
Scientific computation with Python (M1 course, specific to the ENSTA/UPA dual degree)	4
High-Performance Computing	4
Reservoir simulation	4
Industrial Software	4
Mesh and applications	4
Stochastic PDE	4
Inverse problems	4
Asymptotic analysis	4
Mathematical modeling and numerical analysis for Hyperbolic problems	4

Trainings

Intership : Mandatory

Intership duration : 5 months

Admission

Admission requirements

English Language Requirements

CECRL B2 level in English. Students are allowed to use English or French during exams.

Admission Requirements

All students who have completed four years in higher education institutions can apply. Skills in mathematics are required for mathematical and numerical analysis.

A limited number of students: 30

How to apply

Apply here from October to March

Tuition Fees and partial exemptions

Go to the Tuition fee page

> ***The school partially exempts non-EU students from the differentiated fees for initial training enrolling in the Master's program.***

Student capacity

30

Prerequisites

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Admission Requirements

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And after

Further studies

This program will enable students to pursue doctoral studies, either in an academic context or in an industrial context (a collaboration between the industry and UPPA).

Professional insertion

Sectors:

- **Industrial or academic**

Fields:

- **Scientific computing, mathematical and numerical analysis, modeling**

Positions:

- **Engineer, PhD Student, researcher**

Useful info

Contacts

Administration contact

Secrétariat de Mathématiques

secretariat-mathematiques@univ-pau.fr

Place

Pau

Campus

Pau