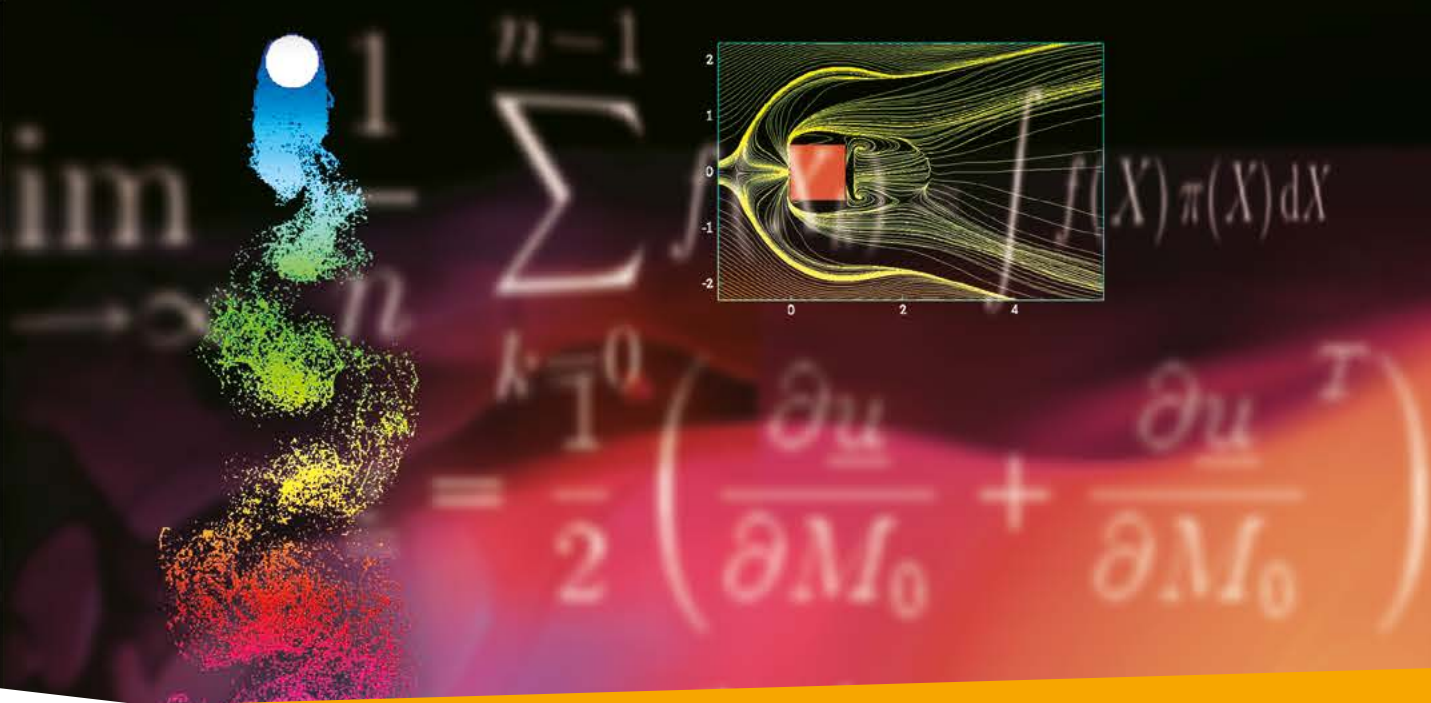


Master's degree in Mathematics and applications

Mathematics, Modeling and Simulation



<http://formation.univ-pau.fr/m-mathematics-mms>

Overview

This degree is delivered after 12 months.

The program provides excellent training in many different areas of applied mathematics related to modelling and simulation with partial differential equations, with applications in fluid mechanics, waves propagation, porous media, etc.

This program provides access to doctoral studies, either in an academic context or in an industrial context (collaboration between industry and UPPA).

The master is fully taught in English and is hosted at the College of Sciences and Technologies for Energy and Environment (STEE) of the Université de Pau et des Pays de l'Adour (UPPA) in France.

The STEE College has been founded within the framework of the prestigious French Initiative of Excellence label I-SITE (Initiatives Sciences, Innovation, Territories and Economy), obtained by our E2S-UPPA project.

Student Learning Outcomes

At the end of this program, the students in MMS will be able to:

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

Prospects for employment or further study

SECTORS:

- Industry
- Academic

POSITIONS:

- Engineer
- Researcher
- Phd Student

FIELDS:

- Scientific computing
- Mathematical and numerical analysis
- Modelling

The program is carried out in close collaboration with the LMAP research laboratory where scientific and experimental practicals will be performed. Students will also benefit from the global research environment and administrative support of the University and of the E2S I-site program.

Program objectives

- This programme aims at providing strong skills in applied mathematics (partial differential equations analysis, numerical analysis, scientific computing and high performance computing, optimization).
- Courses are focusing on applications in industrial problems, fluid mechanics, waves propagation, optimal design...
- This programme prepares students for leading positions in private and public organisations in research and development departments.

MASTER 2 - MMS

SEMESTER 1

- | | |
|--|--------|
| • PDEs Analysis | 5 ECTS |
| • Numerical Analysis of PDEs | 5 ECTS |
| • High Performance Computing | 4 ECTS |
| • Waves | 4 ECTS |
| • Porous Media | 4 ECTS |
| • Finite Volume Methods for Hyperbolic Systems | 4 ECTS |
| • Stochastic PDE | 4 ECTS |
| • Industrial Software | 4 ECTS |
| • Fluid Mechanics | 4 ECTS |
| • French as a foreign language | 4 ECTS |

SEMESTER 2

- | | |
|----------------------------|---------|
| • Internship 5 to 6 months | 30 ECTS |
|----------------------------|---------|

Detailed Program Facts

ACADEMIC YEAR : Our full academic year runs from September to June

APPLICATION DEADLINE :
Applications are opened from November to April

HOW TO APPLY : The application documents must be uploaded on the website : <https://aap-e2s.univ-pau.fr>

PROGRAM INTENSITY: Full-time

DURATION: 1 year

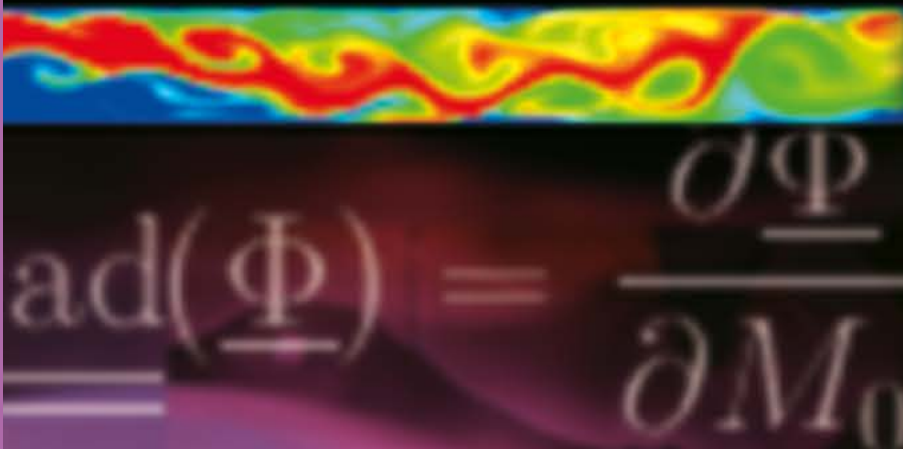
CREDITS: 60 ECTS

LANGUAGE: English

LEVEL OBTAINED: Master

HEAD OF THE MASTER PROGRAM:
Professor Jacques Giacomoni

LOCATION: College of Sciences and Technology for Energy and Environment on the Pau campus (Pau, France)



Admission requirements

ENGLISH LANGUAGE REQUIREMENTS

CECRL B2 level in English, or CECRL B1 level in English (for second year level) and CECRL B2 level in French (for first year Level). Students are allowed to use English or French during exams.

ADMISSION REQUIREMENTS

All students who have completed four years in a higher education institution in mathematics can apply. Sufficient skills in mathematics are needed (mathematical and numerical analysis). Limited number of students: 30 per year

Contact

For any supplementary information or questions related to application, please contact:
jacques.giacomoni@univ-pau.fr

More information :

<http://formation.univ-pau.fr/m-mathematics-mms>

International Welcome Desk :

<http://univ-pau.fr/en/welcome-desk>