



# Master's Degree in Fundamental Mathematics

This programme is the second year specialty of Nantes Université's Master's degree in Pure and Applied Mathematics. It provides you with in-depth and specialised training by developing the reflexes of a future researcher in mathematics: a deep understanding of how theories and proofs are articulated, and the ability to understand, present and appraise mathematical texts.

During the second year, you can choose to specialise in various fields at the crossroads of algebra, analysis, geometry and probability.

Afterwards, you will be able to prepare a doctoral thesis in Mathematics.

## Syllabus

### Third Semester (30 ECTS)

(i.e. first semester of this second year of master)

- Analysis - common course
- Geometry common course
- Students seminars in Mathematics
- Conferences and interventions of external guests (optional)
- Algebra and Geometry Basic Course I
- Algebra and Geometry Basic Course I OR
- Analysis and probability Basic course I
- Analysis and probability Basic course II

### Fourth Semester (30 ECTS)

(i.e. second semester of this second year of master)

- Supervised Advanced Study Project in Mathematics
- Algebra and Geometry Advanced Course I
- Algebra and Geometry Advanced Course II OR
- Analysis and probability Advanced course I
- Analysis and probability Advanced course II

### Partner institutions

Henri Lebesgue Center

<https://www.lebesgue.fr/en>

Ambition Lebesgue Loire project

Financed by the Pays De la Loire region

<http://www.fpl.math.cnrs.fr/ALL>



## Skills

- Advanced expertise in fields related to algebra, analysis, geometry or probability
- Constructive and critical scientific approach
- Ability to make a scientific presentation both at the written and oral
- Analysis of a scientific production in advanced mathematics

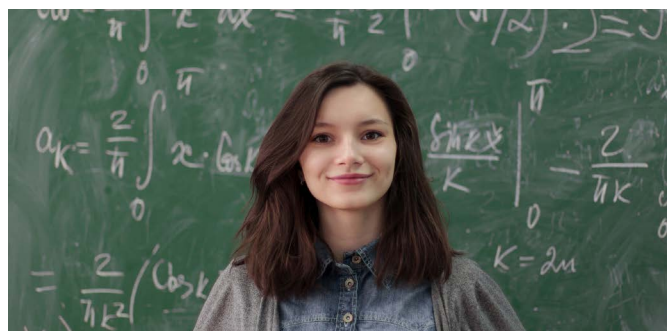
## Career Opportunities

- Teacher
- Research engineer
- Teacher-researcher (after a PhD)
- Computing engineer
- Design Engineer and Research and Development Engineer
- Industrial Project Manager
- Data Scientist

### Scholarship available:

1 000€ / month + travel fare

More information and application process on Henri Lebesgue Center's website.



[univ-nantes.fr/sciences](http://univ-nantes.fr/sciences)



# Admission



› To enter this Master's degree in 2nd year (3rd semester), applicants should hold a degree equivalent to the first year of a master (i.e. a 3-year Bachelor is not acceptable), for example a 1st year of MSc. You will need to have validated the corresponding courses (or their equivalent) of the 1st year.

Applicants should be able to demonstrate their knowledge from transcripts of their degrees.

› You can also enter the programme in first year (1st semester). In that case, applicants should hold a Bachelor's degree that includes strong skills in algebra-geometry and analysis-probability.

⚠ The first year is entirely taught in French.

# Application

› Students coming from a country using the CEF/Campus France procedure must enroll with Campus France.

› Students coming from a country not using the CEF/Campus France procedure follow the non CEF-procedure.

› Exchange students follow the application procedure for exchange students.

+ More details on application procedures on the programme's website.

# Cost

The cost refers to education and training costs that includes additional services such as French language classes.

+ A provisional budget is available on Nantes Université's website.

# Language

The programme is taught in French in year 1 and in English in year 2. A good command of the English language is required (B2 score as defined by the Council of Europe).

## Faculty key figures

5 000

Students

19%

International  
Students

96%

Professional  
integration\*

11

Research Units

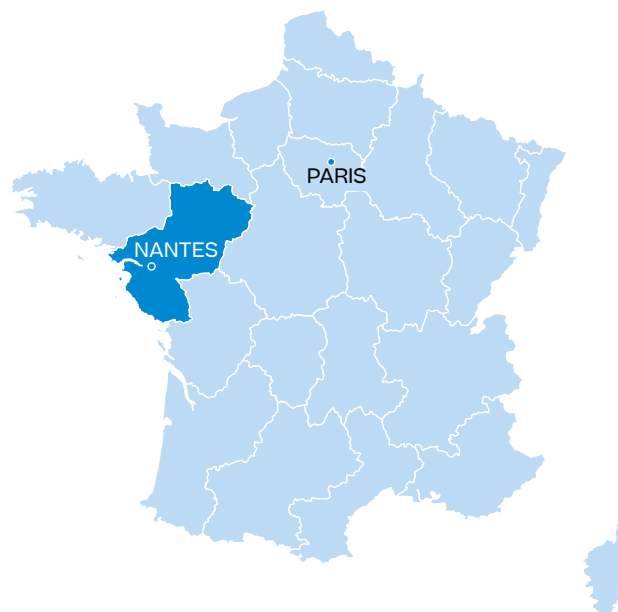


# Location

In Nantes, the university is organized into four major campuses along the Erdre River, crossing the city from north to south to the Ile de Nantes on the Loire River.

The programme courses are located on the Lombarderie Campus which is a wooded area well served by public transportation.

Nantes (600,000 inhab.) is located close to the Atlantic Ocean and is regularly rated as one of the most pleasant French cities to live in. Thanks to its beautiful parks, efficient public transport and other policies for sustainable development, Nantes has been awarded the status of European Green Capital.



# Academic calendar

Courses start in early September.

## Contact

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