

SCIENCES, TECHNOLOGIES AND HEALTH

Fundamentals mathematics

Master in Mathematics and applications

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Baccalaureate



Duration 2 years



Component UFR IM2AG (informatique, mathématiques et mathématiques appliquées)



Language(s) of instruction French, English

Presentation

Target level

+5

This is a high-level training in fundamental mathematics research. This course is the gateway to contemporary research in fundamental mathematics, in Grenoble. The master 2nd year honors in Mathematics and mathematical applications pathways of the Fourier institute is part of the Graduate school of mathematics, Information sciences and technologies, Computer science and depends on the University Grenoble Alpes. This course is recommended to students from the 1st year of general mathematics, and candidates to the agregation of mathematics, before they perform their tenure.

The objectives are to have an ntroduction to fundamental mathematics research. Preparation for a PhD thesis.

International education Internationally-oriented programmes

International dimension

Internationally oriented training

Organisation

Admission

Access conditions

The first year master's is accessible to candidates according to their transcripts (and/or interview) :

- · Proof of a national degree conferring the degree of bachelor in a field compatible with that of the master's degree
- · Or by validation of studies or acquired experience according to the conditions determined by the university or the training

The second year master's is accessible to candidates according to their transcripts (and/or interview) :

- · Having validated the first year of a compatible course or by validating studies or acquired experience according to the conditions determined by the university or the training Public continuing education : You are in charge of continuing education :
- · if you resume your studies after 2 years of interruption of studies
- or if you followed a formation under the regime formation continues one of the 2 preceding years
- · or if you are an employee, job seeker, self-employed





If you do not have the diploma required to integrate the training, you can undertake a 🗹 validation of personal and professional achievements (VAPP)

Candidature / Application

Do you want to apply and register? Note that the procedure differs depending on the degree considered, the degree obtained, or the place of residence for foreign students.

C Find out which procedure applies to me and apply

And after

Further studies

Doctorate

Targeted trades

- Mathematician in research and development teams
- Faculty member

- Mathematical engineering professions: risk management, modeling, optimization, data analysis ...

Useful info

Contacts

Program director

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Program director

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Program director

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Program administration

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Course location(s) - City

Grenoble

Campus

Grenoble - University campus





Program

Master in general mathematics 1st year

Semester 7

	Nature	СМ	TD	TP	Crédits
UE Algebra	Teaching Unit (UE)	33h	48h		9 credits
UE Holomorphic functions	Teaching Unit (UE)	21h	33h		6 credits
UE Probabilities	Teaching Unit (UE)	33h	48h		9 credits
UE Analysis	Teaching Unit (UE)	33h	48h		9 credits

Semester 8

	Nature	CM	TD	TP	Crédits
UE Study and research work	Teaching Unit (UE)				6 credits
UE Effective algebra and cryptographie	Teaching Unit (UE)	21h	33h		6 credits
UE Compléments sur les EDP	Teaching Unit (UE)	21h	33h		6 credits
UE Differential geometry	Teaching Unit (UE)	19,5h	29h		6 credits
UE Markov process	Teaching Unit (UE)	21h	33h		6 credits
UE Galois theory	Teaching Unit (UE)	21h	33h		6 credits
UE Operations Research (AM)	Teaching Unit (UE)				6 credits
UE Operations Research	Teaching Unit (UE)	16,5h	16,5h		3 credits
Operations Research Complementary	OTHER	16,5h	16,5h		
UE English S8	Teaching Unit (UE)		24h		3 credits



Master 2nd year

Semester 9

	Nature	СМ	TD	TP	Crédits
UE Morse theory in geometry and topology	Teaching Unit (UE)	36h	18h		12 credits
UE Random models on lattices	Teaching Unit (UE)	36h	18h		12 credits
UE Analysis and probability on manifolds	Teaching Unit (UE)	36h	18h		12 credits
UE Topology of random hypersurfaces	Teaching Unit (UE)	24h			6 credits
UE Probabilistic and geometric techniques in high dimension	Teaching Unit (UE)	24h			6 credits

Semester 10

	Nature	СМ	TD	TP	Crédits
UE Research internship	Teaching Unit (UE)				27 credits
UE English	Teaching Unit (UE)				