

APPMATH - Introduction

Introduction

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The aim of the in-depth minor in mathematics is to offer learning that is supplementary to the discipline of the Bachelor's major. The very wide range of courses has been devised for students of the Bachelor in Mathematics

- who wish to supplement their Bachelor course with courses that remain within the field of mathematics, and/or
- who wish to supplement their Bachelor course with courses close to mathematics but who do not wish to undertake a single-topic minor (minor in computer science, in physics, in engineering science, applied mathematics, etc.).

APPMATH - Teaching profile

Learning outcomes

The in-depth minor in mathematics contributes to the acquisition of the knowledge and skills appropriate to the Bachelor of Mathematics:

- disciplinary basics needed to pursue studies in mathematics or in closely related fields.
- capacity for abstract thought and critical spirit
- skills in scientific communication
- independent learning

These skills are detailed in the presentation of the programme for the Bachelor in Mathematics. Depending on the courses chosen, the student will have acquired supplementary training in closely related disciplines (physics, statistics and probability, economics, computing, applied mathematics). These courses help to develop the capacity for the analysis, in depth and from a variety of points of view, of a mathematical problem or a complex system belonging to scientific disciplines other than mathematics, in order to extract the essential features and to relate them to the most suitable theoretical tools.

Programme

DETAILED PROGRAMME BY SUBJECT

- Mandatory
- ⊗ Optional
- △ Not offered in 2024-2025
- ⊙ Not offered in 2024-2025 but offered the following year
- ⊕ Offered in 2024-2025 but not the following year
- △ ⊕ Not offered in 2024-2025 or the following year
- Activity with requisites
- ⊗ Open to incoming exchange students
- ⊗ Not open to incoming exchange students
- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

Click on the course title to see detailed informations (objectives, methods, evaluation...)

30 crédits

Year

2 3

○ Content:

○ Cours au choix (30 credits)

From the following courses, students choose 10 credits in the second year and 20 credits in the third year, in agreement with their study adviser.

⊗ Mathématiques

⊗ LMAT1236	Introduction to logic: set theory		
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				Year	
				2	3
⌘ LMAT2440	Number theory	Pierre-Emmanuel Caprace Olivier Pereira	PR [q2] [30h+15h] [5 Credits] > English-friendly		x
⌘ LMAT2170	History and epistemology of mathematics	Pierre Bieliavsky Pierre-Emmanuel Caprace Marino Gran Jean Van Schaftingen	PR [q2] [30h+15h] [5 Credits]	x	x

⌘ **Mathématiques appliquées et informatique**

⌘ LMAT2450	Cryptography	Olivier Pereira	PR [q1] [30h+15h] [5 Credits] > French-friendly		x
⌘ LMAT2460	Finite mathematics and combinatorial structures	Jean-Charles Delvenne Raphaël Jungers	PR [q1] [30h] [5 Credits]		x
		Vincent Legat Jean-François Remacle	PR [q2] [30h+30h] [5 Credits]	x	x
⌘ LINMA1170	Numerical analysis	Jean-François Remacle	PR [q2] [30h+22.5h] [5 Credits]	x	x
⌘ LINMA1691	Discrete mathematics - Graph theory and algorithms	Jean-Charles Delvenne Jean-Charles Delvenne			

			Year
			2 3
⊗ LEPL1804	Sustainable development and transition <i>Les unités d'enseignement LEPL1804 et LBIR2050 ne sont pas cumulables: si l'étudiant a déjà suivi ou suit l'une de ces 2 UEs, il ne peut pas s'inscrire à l'autre.</i>	David Bol David Bol (compensates) Hervé Jeanmart) Patricia Luis Alconero Patricia Luis Alconero (compensates) Hervé Jeanmart) Xavier Marichal Xavier Marichal (compensates) Hervé Jeanmart) Jean-Pierre Raskin Jean-Pierre Raskin (compensates) Hervé Jeanmart)	PK [q1] [22.5h+15h] [3 Credits] 🌐

