MATH2M1 2024 - 2025	Master [60] in Mathematics

At Louvain-la-Neuve - 60 credits - 1 year - Day schedule - In French
Dissertation/Graduation Project : **YES** - Internship : **NO**
Activities in English: **YES** - Activities in other languages : **NO**
Activities on other sites : **NO**
Main study domain : **Sciences**
Organized by: **Faculty of Science (SC)**
Programme acronym: **MATH2M1** - Francophone Certification Framework: 7

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MATH2M1 - **Teaching profile**

Learning outcomes

By the end of the course the student will have acquired the knowledge of the discipline and the transferable skills needed to practise the many professional activities that require substantial mathematical skills: these are highly varied professions in which mathematics interacts with other fields and mathematicians collaborate with people who come from different backgrounds.

Learning outcomes

Optional courses [40.0]

OPTIONAL COURSES [40.0]

⊙ 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...)

Students will choose at least 15 credits from the list of courses shown below and will complete the programme with courses in the research focus or with options from the 120 credits Master in Mathematical Sciences.

⊙ *Content:*

⊗ LMAT2130	Partial differential equations	Heiner Olbermann	EN [q1] [30h+15h] [5 Credits] 🌐	
⊗ LMAT2415	Advanced harmonic analysis	Jean Van Schaftingen	FR [q1] [30h+15h] [5 Credits] 🌐	
⊗ LMAT2250	Calculus of variations	Augusto Ponce	FR [q2] [30h+15h] [5 Credits] ⊕ 🌐 > *English-friendly*	
⊗ LMAT2120	Groups theory	Pierre-Emmanuel Caprace	FR [q1] [30h+15h] [5 Credits] ⊘ 🌐 > *English-friendly*	
⊗ LMAT2150	Category theory	Marino Gran	EN [q1] [30h+15h] [5 Credits] 🌐 > *French-friendly*	
⊗ LMAT2221	Universal algebra	Enrico Vitale	FR [q2] [30h+15h] [5 Credits] ⊘ 🌐 > *English-friendly*	
⊗ LMAT2215	Homological algebra	Tim Van der Linden	EN [q1] [30h+15h] [5 Credits] ⊕ 🌐 > *French-friendly*	
⊗ LMAT2430	Lie's therory elements and differential geometry	Pierre Bieliavsky	FR [q2] [30h+15h] [5 Credits] 🌐	
⊗ LMAT2420	Complex analysis	Christophe Charlier (compensates Tom Claeys)	EN [q2] [30h+15h] [5 Credits] 🌐 > *French-friendly*	
⊗ LMAT2140	Algebraic topology	Pascal Lambrechts	EN [q1] [30h+15h] [5 Credits] ⊕ 🌐	
⊗ LMAT2240	Low-dimensional topology	Pedro Dos Santos Santana Forte Vaz	EN [q2] [30h+15h] [5 Credits] △ 🌐	
⊗ LMAT2266	Lie Theory	Timothée Marquis	EN [q1] [30h+15h] [5 Credits] ⊕ 🌐	

The programme's courses and learning outcomes

For each UCLouvain training programme, a reference framework of learning outcomes specifies the the skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference framework of learning outcomes.

MATH2M1 - **Information**

Access Requirements

Master course admission requirements are defined by the French Community of Belgium Decree of 7 November 2013 defining the higher education landscape and the academic organisation of courses.

General and specific admission requirements for this programme must be satisfied at the time of enrolling at the university.

Unless explicitly mentioned, the bachelor's, master's and licentiate degrees listed in this table or on this page are to be understood as those issued by an institution of the French, Flemish or German-speaking Community, or by the Royal Military Academy.

In the event of the divergence between the different linguistic versions of the present conditions, the French version shall prevail.

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SUMMARY

Specific access requirements

In addition to the access conditions described below, candidates will have to provide proof of a sufficient command of the French language (level B1 of the CEFR, Common European Framework of Reference for Languages).

Students who wish to be admitted on the basis of a dossier (see tables below) are invited to consult the criteria for the evaluation of application.

University Bachelors