



The version you're consulting is not definitive. This programme still may change. The final version will be published on 1th June.

**At Louvain-la-Neuve - 120 credits - 2 years - Day schedule - In French**

Dissertation/Graduation Project : **YES** - Internship : **YES**

Activities in English: **NO** - Activities in other languages : **NO**

Activities on other sites : **NO**

Main study domain : **Sciences de l'éducation et Enseignement**

Organized by: **Faculty of Science (SC)**

Programme acronym: **MATH2M4**

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## MATH2M4 - Introduction

### Introduction

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## MATH2M4 - Teaching profile

### Learning outcomes

## MATH2M4 Programme

### Detailed programme by subject

#### CORE COURSES

- Mandatory
- ⊗ Optional
- △ Not offered in 2025-2026
- ⊙ Not offered in 2025-2026 but offered the following year
- ⊕ Offered in 2025-2026 but not the following year
- △ ⊕ Not offered in 2025-2026 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...)

Year

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#### o Didactique et pédagogie (25 credits)

##### o Un cours parmi :

⊗ LEISS2101	Pédagogie générale [C] Cours dispensé à LLN en horaire de jour	(FR) [q1] [37.5h] [5 Credits] 🌐	X	
⊗ LEISS2102	Pédagogie générale [C] Cours dispensé à LLN en horaire décalé	(FR) [q1] [37.5h] [5 Credits] 🌐	X	
⊗ MEISS2103	Pédagogie générale [C] Cours dispensé à Mons en horaire décalé	(FR) [q1] [30h] [5 Credits] 🌐	X	
○ LEISS2107	Ecole et diversités [C]	(FR) [q1] [22.5h+15h] [5 Credits] 🌐		X
○ LMAT2360	Teaching and learning core mathematics [C]	(FR) [q1] [37.5h] [5 Credits] 🌐	X	
○ LMAT2320A	Didactics and epistemology of mathematics - Part A (general questions)	(FR) [q1] [22.5h+7.5h] [3 Credits] 🌐		X
○ LMAT2320B	Didactics and epistemology of mathematics - Part B (specialised questions)	(FR) [q2] [22.5h+7.5h] [3 Credits] 🌐		X
○ LMAT2330	Seminar on the teaching of mathematics	(FR) [q1+q2] [15h+30h] [4 Credits] 🌐		X

##### ⊗ En remplacement de LMAT2330

En fonction de la formation précédente et de l'expérience professionnelle, l'étudiant peut faire une demande au jury pour remplacer le cours LMAT2330 par un des cours suivants :

⊗ LMAT2335	Mathematical didactics workshop	(FR) [q1+q2] [0h+45h] [5 Credits] 🌐		X
⊗ LPHYS2320	Didactics and epistemology of science and physics [C] Sera prochainement remplacé par le partim LPHYS2320C	(FR) [q1+q2] [45h+15h] [4 Credits] 🌐		X
⊗ LCHM2320	Didactics and epistemology of science and chemistry [C] Sera prochainement remplacé par le partim LCHM2320C	(FR) [q1+q2] [45h+15h] [4 Credits] 🌐		X

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⊗ LBIO2320	Didactics and epistemology of science and biology [C] <i>Sera prochainement remplacé par le partim LBIO2320C</i>		FR [q1+q2] [45h+15h] [4 Credits] 🌐		x
⊗ LGEO2320C	Didactics and epistemology of geography - Part A (general questions) and listening session		FR [q1] [22.5h+7.5h] [4 Credits] 🌐		x

### o Sciences humaines et sociales (15 credits)

#### o Un cours parmi :

⊗ LEISS2201	Psychologie du développement et des apprentissages [C] <i>Cours dispensé à LLN en horaire de jour</i>		FR [q2] [37.5h+15h] [4 Credits] 🌐	x	
⊗ LEISS2202	Psychologie du développement et des apprentissages [C] <i>Cours dispensé à LLN en horaire décalé</i>		FR [q2] [37.5h+15h] [4 Credits] 🌐	x	

#### o Un cours parmi :

⊗ LEISS2203	Approches sociale, culturelle et politique de l'éducation [C] <i>Cours dispensé à LLN en horaire de jour</i>		FR [q2] [37.5h+15h] [4 Credits] 🌐	x	
⊗ LEISS2204	Approches sociale, culturelle et politique de l'éducation [C] <i>Cours dispensé à LLN en horaire décalé</i>		FR [q2] [37.5h+15h] [4 Credits] 🌐	x	

#### o Un cours parmi :

⊗ LEISS2205	Ethique de l'éducation, neutralité et citoyenneté [C] <i>Cours dispensé à LLN en horaire de jour</i>		FR [q2] [22.5h] [2 Credits] 🌐	x	
⊗ LEISS2206	Ethique de l'éducation, neutralité et citoyenneté [C] <i>Cours dispensé à LLN en horaire décalé</i>		FR [q2] [22.5h] [2 Credits] 🌐	x	

#### o Un cours parmi :

⊗ LEISS2104	Communication en contexte scolaire [C] <i>Cours dispensé à LLN en horaire de jour</i>		FR [q1] [22.5h+15h] [5 Credits] 🌐	x	
⊗ LEISS2105	Communication en contexte scolaire [C] <i>Cours dispensé à LLN en horaire décalé</i>		FR [q1] [22.5h+15h] [5 Credits] 🌐	x	
⊗ MEISS2106	Communication en contexte scolaire [C] <i>Cours dispensé à Mons en horaire décalé</i>		FR [q1] [15h+15h] [5 Credits] 🌐	x	

### o Stages (20 credits)

o LMAT2370	Observation internship in common core mathematics (24 hours) and support seminar [C]		FR [q1] [15h] [5 Credits] 🌐	x	
o LMAT2350	Long internship (90 hours) and accompanying seminar in mathematics [C]		FR [q1+q2] [45h+22.5h] [15 Credits] 🌐		x

### o Formation disciplinaire (40 credits)

o LMAT2170	History and epistemology of mathematics	Pierre Bieliavsky Pierre-Emmanuel Caprace Marino Gran Jean Van Schaftingen	FR [q2] [30h+15h] [5 Credits] 🌐	x	
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#### o Au moins un cours parmi :

⊗ LMAT2335	Mathematical didactics workshop		FR [q1+q2] [0h+45h] [5 Credits] 🌐		x
⊗ LPHYS2320	Didactics and epistemology of science and physics [C] <i>Sera prochainement remplacé par le partim LPHYS2320C</i>		FR [q1+q2] [45h+15h] [4 Credits] 🌐		x

#### o Formation fondamentale en mathématiques

L'étudiant-e suit obligatoirement les cours suivants, s'il ou elle n'a pas crédité ces cours ou ces de cours équivalents dans un autre programme.

⊗ LMAT1222	Complex analysis 1	Tom Claeys	FR [q2] [30h+15h] [5 Credits] 🌐 > English-friendly	x	
⊗ LMAT1231	Multilinear algebra and group theory	Pierre-Emmanuel Caprace	FR [q1] [30h+30h] [5 Credits] 🌐 > English-friendly	x	
⊗ LMAT1241	Geometry II	Pierre Bieliavsky	FR [q2] [45h+30h] [6 Credits] 🌐 > English-friendly	x	
⊗ LMAT1323	Topology	Pedro Dos Santos Santana Forte Vaz	FR [q1] [30h+15h] [5 Credits] 🌐 > English-friendly	x	x

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**o Un cours de logique (cours bisannuels) parmi :**

⊗ LMAT1236	Introduction to logic: set theory		FR [q2] [30h+15h] [5 Credits]  	X	X
⊗ LMAT1237	Introduction to logic: model theory	Enrico Vitale	FR [q2] [30h+15h] [5 Credits]  	X	X



























**o Formation approfondie en mathématiques**

L'étudiant-e complète son programme en choisissant parmi les cours suivants :

⊗ LMAT1322	Real and harmonic analysis		FR [q2] [30h+30h] [5 Credits]  > English-friendly	X	X
⊗ LMAT1331	Commutative algebra		FR [q1] [30h+15h] [5 Credits] 	X	X
⊗ LMAT1342	Geometry 3	Pascal Lambrechts	FR [q1] [30h+30h] [5 Credits]  > English-friendly	X	X
⊗ LMAT1361	Galois Theory	Pierre-Emmanuel Caprace	FR [q2] [30h+15h] [5 Credits] 	X	X
⊗ LMAT1371	Probability Theory	Karim Barigou	FR [q2] [30h+22.5h] [5 Credits] 	X	X





**o Formation spécialisée en mathématiques**

L'étudiant-e ayant déjà crédité dans un autre programme ou inscrit à son programme au moins 40 crédits des cours des blocs «Formation fondamentale» et «Formation approfondie» peut inscrire à son programme des cours de la liste ci-dessous:

⊗ LMAT1223	Differential equations		FR [q2] [30h+15h] [5 Credits]  > English-friendly	X	X
⊗ LPSP1209	Statistics, inference on one or two variables		FR [q1] [22.5h+15h] [4 Credits] 	X	X
⊗ LINMA1691	Discrete mathematics - Graph theory and algorithms	Vincent Blondel Jean-Charles Delvenne	FR [q1] [30h+22.5h] [5 Credits] 	X	X
⊗ LINMA1702	Optimization models and methods I		FR [q2] [30h+22.5h] [5 Credits] 	X	X
⊗ LINFO1103	Introduction to algorithms	Pierre Dupont	FR [q2] [30h+30h] [5 Credits] 	X	X
⊗ LINFO1123	Calculability and Complexity [M]		FR [q2] [30h+30h] [5 Credits] 	X	X
⊗ LMAT2120	Groups theory	Pierre-Emmanuel Caprace	FR [q1] [30h+15h] [5 Credits]   > English-friendly	X	X
⊗ LMAT2130	Partial differential equations		FR [q1] [30h+15h] [5 Credits] 	X	X
⊗ LMAT2140	Algebraic topology	Pascal Lambrechts	FR [q1] [30h+15h] [5 Credits]  	X	X
⊗ LMAT2150	Category theory		FR [q1] [30h+15h] [5 Credits]  > French-friendly	X	X
⊗ LMAT2215	Homological algebra	Tim Van der Linden	FR [q1] [30h+15h] [5 Credits]   > French-friendly	X	X
⊗ LMAT2221	Universal algebra	Enrico Vitale	FR [q2] [30h+15h] [5 Credits]   > English-friendly	X	X
⊗ LMAT2240	Low-dimensional topology [M]		FR [q2] [30h+15h] [5 Credits]  	X	X
⊗ LMAT2250	Calculus of variations	Augusto Ponce	FR [q2] [30h+15h] [5 Credits]   > English-friendly	X	X
⊗ LMAT2266	Lie Theory		FR [q1] [30h+15h] [5 Credits]  	X	X
⊗ LMAT2415	Advanced harmonic analysis	Jean Van Schaftingen	FR [q1] [30h+15h] [5 Credits] 	X	X
⊗ LMAT2420	Complex analysis		FR [q2] [30h+15h] [5 Credits]  > French-friendly	X	X
⊗ LMAT2430	Lie's theory elements and differential geometry	Pierre Bieliavsky	FR [q2] [30h+15h] [5 Credits] 	X	X
⊗ LMAT2440	Number theory		FR [q1] [30h+15h] [5 Credits]  > English-friendly	X	X

**o Formation multidisciplinaire**

L'étudiant-e ayant déjà crédité dans un autre programme ou inscrit à son programme au moins 50 crédits des cours des blocs «Formation fondamentale», «Formation approfondie» et «Formation spécialisée» peut inscrire au plus 10 crédits parmi les cours suivants :

⊗ LPHYS1111	Mechanics 1 [M]		FR [q1] [52.5h+52.5h] [9 Credits] 	X	X
⊗ LPHYS1221	Electromagnetism 1		FR [q1] [52.5h+52.5h] [10 Credits] 	X	X
⊗ LBIO1110	Life : diversity and evolution		FR [q1] [30h+10h] [4 Credits] 	X	X
⊗ LCHM1112	General Chemistry	Yaroslav Filinchuk	FR [q1] [30h+22.5h] [5 Credits] 	X	X
⊗ LGEO1111	Earth and society : perspectives from geography	Eric Lambin	FR [q2] [30h+15h] [5 Credits] 	X	X
⊗ LECGE1108	Pratiquer l'économie (1) - Économie politique [C]		FR [q1] [45h+15h] [6 Credits] 	X	X

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⌘ LCHM2320	Didactics and epistemology of science and chemistry [C] <i>Sera prochainement remplacé par le partim LCHM2320C</i>		FB [q1+q2] [45h+15h] [4 Credits] 🌐		x
⌘ LBIO2320	Didactics and epistemology of science and biology [C] <i>Sera prochainement remplacé par le partim LBIO2320C</i>		FB [q1+q2] [45h+15h] [4 Credits] 🌐		x
⌘ LGEO2320C	Didactics and epistemology of geography - Part A (general questions) and listening session		FB [q1] [22.5h+7.5h] [4 Credits] 🌐		x
⌘ LAGES2301	Didactique des sciences économiques [C]		FB [q1] [45h+15h] [8 Credits] 🌐		x

### o Recherche et intégration (20 credits)

○ LEISS2902	Initiation à la recherche en éducation [C] <i>Cours dispensé à LLN en horaire de jour</i>		FB [q1] [15h] [2 Credits] 🌐		x
○ LSCI2351	Master thesis support seminar [C]		FB [q1+q2] [22.5h+22.5h] [3 Credits] 🌐		x
○ LSCI2350	Master thesis [C]		FB [q1+q2] [] [15 Credits] 🌐		x

## Course prerequisites

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There are no prerequisites between course units (CUs) for this programme, i.e. the programme activity (course unit, CU) whose learning outcomes are to be certified and the corresponding credits awarded by the jury before registration in another CU.

## The programme's courses and learning outcomes

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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.

## MATH2M4 - Information

### Access Requirements

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#### SUMMARY

- > [General access requirements](#)
- > [Specific access requirements](#)
- > [University Bachelors](#)
- > [Non university Bachelors](#)
- > [Holders of a 2nd cycle University degree](#)
- > [Access based on validation of professional experience](#)
- > [Admission and Enrolment Procedures for general registration](#)

#### University Bachelors

Diploma	Special Requirements	Access	Remarks
<b>UCLouvain Bachelors</b>			
<b>Others Bachelors of the French speaking Community of Belgium</b>			
<b>Bachelors of the Dutch speaking Community of Belgium</b>			
<b>Foreign Bachelors</b>			

#### Non university Bachelors

#### Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	Remarks
<b>"Licenciés"</b>			
<b>Masters</b>			

#### Access based on validation of professional experience

#### Admission and Enrolment Procedures for general registration



## Evaluation

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***The evaluation methods comply with the [regulations concerning studies and exams](#). More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".***

