

**At Louvain-la-Neuve - 30 credits - 1 year - Day schedule - In French**Dissertation/Graduation Project : **NO** - Internship : **YES**Activities in English: **NO** - Activities in other languages : **NO**Activities on other sites : **YES**Main study domain : **Sciences**Organized by: **Faculty of Science (SC)**Programme acronym: **MATH2A** - Francophone Certification Framework: 7**Table of contents**

Introduction .....	2
Teaching profile .....	3
Learning outcomes .....	3
Programme structure .....	3
Programme .....	4
Detailed programme by subject .....	4
The programme's courses and learning outcomes .....	6
Information .....	7
Access Requirements .....	7
Specific professional rules .....	9
Teaching method .....	9
Evaluation .....	9
Contacts .....	9

## MATH2A - Introduction

### Introduction

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## MATH2A - Teaching profile

### Learning outcomes

#### 1. Vision of the diploma

Teaching mathematics to students in secondary education, such is the challenge that the aggregation student (didactics course) prepares to face. The vision of aggregation in mathematics (didactics course) is to provide him or her with an initial training that will enable the student to mobilize the necessary skills to start out effectively in the profession of teacher and to develop positively.

Today's teachers are called on to play an essential role for their students, so say the "mission decrees" of 24 July 1997:

- to promote self-confidence and the development of the person of each student;
- to show the students how to assimilate knowledge and acquire the skills to make them able to learn throughout their lives and take an active place in economic, social and cultural life;
- to prepare all students to become responsible citizens, capable of contributing to the development of a democratic, solidarist, pluralist society open to other cultures;
- to guarantee all students equal opportunities for social emancipation.

The initial teacher training is based on the command of existing skills and abilities (developed in part in the core of the programme) that the student must mobilize and developing through different aggregation activities (didactics course):

- the knowledge and discipline(s) to be taught;
- clear, correct communication in the language of teaching, both oral and written;
- a critical, autonomous relation with the reference knowledge (scientific and cultural);
- relational capacities associated with the profile of the profession;
- a rich general knowledge and an openness to the diversity of cultures allowing future students to be made receptive to the world;
- the concern of participating in the role of democratization of the school.

#### 2. The referential of skills and abilities acquired through training defining the output profile of diplomas on completion of aggregation in mathematics (didactics course)

At the end of the programme of aggregation in mathematics (didactics course) the graduate will have acquired and demonstrated command of the knowledge and skills mentioned below. These latter are defined in reference in the Decree of 8 February 2001 on the initial training for upper secondary education aggregation.

On successful completion of this programme, each student is able to :

##### 1. Intervening in a school context, in partnership with different actors.

- 1.1. Situating and appropriating the role assigned to the teacher within the school institution, with reference to the legal texts.
- 1.2. Mobilizing knowledge in human sciences for a correct interpretation of situations experienced in and around the classroom and for a better adaptation to school publics.
- 1.3. Mastering and mobilizing the communicational and relational skills essential for exercising the profession of teacher.
- 1.4. Dialoguing and collaborating constructively with the education partners involved in the training activities (in seminars and training courses: headmasters, supervisors, course leaders and other persons in the training course).

##### 2. Teaching in authentic, varied situations.

- 2.1. Integrating teaching attitudes and behaviours on the service of the individual and collective training and the management of the class group.
- 2.2. Acquiring and using the didactics and disciplinary epistemology that guide pedagogic action.
- 2.3. Transposing reference learned knowledge and cultural practices into taught knowledge.
- 2.4. Conceiving and planning teaching-training situations, including assessment, according to the students concerned and in connection with the skills referentials and programmes.
- 2.5. Steering and adjusting the implementation of teaching-training situations.
- 2.6. Being capable of commanding new disciplinary and interdisciplinary knowledge to be taught.
- 2.7. Exploring new approaches and disciplinary, interdisciplinary and technological pedagogic tools.
- 2.8. In more specific (or complementary) way, for the teaching of mathematics, the graduate is capable of maîtriser différents outils et stratégies pour apprendre aux élèves à produire des commentaires personnels et autonomes.

##### 3. Exercising critical faculties and pursuing a logic of continuous development.

- 3.1. Measuring the main ethical issues in connection with day-to-day practice.
- 3.2. Challenging one's initial representations and conceptions with a view to developing them.
- 3.3. Adopting a reflective attitude on one's teaching practices with reference to didactic and pedagogic principles and research in education.
- 3.4. Integrating a logic of continuous apprenticeship and development essential for developing positively in the school environment, linked to societal reality.

### Programme structure

Ces compétences sont développées via trois types d'activités :

- des stages dans l'enseignement secondaire supérieur (60h);
- des séminaires en petits groupes;
- des cours magistraux et des conférences.

Une partie de ces activités est commune à toutes les disciplines (elles portent le sigle AGRE), l'autre partie est propre à la discipline (ces activités portent un sigle disciplinaire). Les activités totalisent 300 heures (30 crédits).

La formation diplômante « Agrégation de l'enseignement secondaire supérieur » est organisée en référence au décret du 8 février 2001 relatif à la formation initiale des enseignants du secondaire supérieur en Communauté française de Belgique et au décret du 17 décembre 2003 organisant la neutralité inhérente à l'enseignement officiel subventionné et portant diverses mesures en matière d'enseignement.

Le programme détaillé correspond aux 30 crédits de la finalité didactique là où elle est organisée. Si aucune finalité didactique n'est organisée dans la discipline, un programme d'agrégation spécifique propose les trois types d'activités, dans le respect des décrets sus-mentionnés.

## MATH2A Programme

### Detailed programme by subject

**IMPORTANT NOTE: In accordance with article 138 para. 4 of the decree of 7 November 2013 concerning higher education and the academic organisation of studies, teaching practice placements will not be assessed in the September session. Students are required to make every effort to successfully complete the teaching practice in the June session, subject to having to retake the year.**

- 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...)

#### ○ Content:

○ LMAT2310	Stages d'enseignement en mathématique (en ce compris le séminaire d'intégration des stages)	Laure Ninove	(FR) [q1+q2] [15h+40h] [7 Credits] 🌐
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#### ○ Concevoir, planifier et évaluer des pratique d'enseignement et d'apprentissage (13 credits)

○ LMAT2320	Didactique et épistémologie de la mathématique	Cécile Coyette Sonia Ghorbal Laure Ninove (coord.)	(FR) [q1+q2] [60h] [6 Credits] 🌐
○ LAGRE2220	General didactics and education to interdisciplinarity	Stéphane Colognesi Severine De Croix Myriam De Kesel Jean-Louis Dufays Anne Ghysselinckx Véronique Lemaire Benoît Vercruyse	(FR) [q1+q2] [37.5h] [3 Credits] 🌐

#### ○ Didactique et épistémologie d'une autre discipline (en ce compris le stage d'écoute) (4 credits)

Students will choose one course from the following

⊗ LGEO2320A	Didactique et épistémologie de la géographie (en ce compris le stage d'écoute)	Marie-Laurence De Keersmaecker	(FR) [q1] [37.5h+10h] [4 Credits] 🌐
⊗ LMAT2330	Seminar on the teaching of mathematics	Enrico Vitale	(FR) [q1+q2] [15h+30h] [4 Credits] 🌐

⌘ LSCI2320	Didactics and epistemology of science	Myriam De Kesel (coord.) Marc de Wergifosse Gabriel Dias de Carvalho Junior	FR [q1] [22.5h] [2 Credits] 🌐
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### ⌘ Complement to the didactics and epistemology of science course (2 credits)

2 ECTS credits among

⌘ LBIO2340C	Didactics and Epistemology of Biology - 2d degree	Myriam De Kesel	FR [q1] [18.5h] [2 Credits] 🌐
⌘ LBIO2340D	Didactics and Epistemology of Biology - 3d degree	Myriam De Kesel	FR [q2] [19h] [2 Credits] 🌐
⌘ LCHM2340C	Didactics and epistemology of chemistry - 2d degree	Marc de Wergifosse Nathalie Matthys	FR [q1] [18.5h] [2 Credits] 🌐
⌘ LCHM2340D	Didactics and epistemology of chemistry	Marc de Wergifosse Nathalie Matthys	FR [q2] [19h] [2 Credits] 🌐
⌘ LPHYS2471C	Didactics and Epistemology of Physics - 2d degree	Gabriel Dias de Carvalho Junior	FR [q1] [18.5h] [2 Credits] 🌐
⌘ LPHYS2471D	Didactics and Epistemology of Physics - 3d degree	Gabriel Dias de Carvalho Junior	FR [q2] [19h] [2 Credits] 🌐

## o Comprendre et analyser l'institution scolaire et son contexte (6 credits)

### o Séminaire d'observation et d'analyse de l'institution scolaire et de son contexte (en ce compris le stage d'observation) (4 credits)

Choisir 1 des activités suivantes. Le cours et le séminaire doivent être suivis au même quadrimestre.

⌘ LAGRE2120P	Observation et analyse de l'institution scolaire et de son contexte (en ce compris le stage d'observation)		FR [q1] [22.5h+25h] [4 Credits] 🌐
⌘ LAGRE2120Q	Observation et analyse de l'institution scolaire et de son contexte (en ce compris le stage d'observation)		FR [q2] [22.5h+25h] [4 Credits] 🌐
o LAGRE2400	See specifications in french	Xavier Delgrange Hervé Pourtois (coord.) Pierre-Etienne Vandamme	FR [q2] [20h] [2 Credits] 🌐

## o Animer un groupe et travailler en équipe (4 credits)

### o Comprendre l'adolescent en situation scolaire, gérer la relation interpersonnelle et animer le groupe classe (4 credits)

Choisir 1 des activités suivantes.

⌘ LAGRE2020P	Comprendre l'adolescent en situation scolaire, Gérer la relation interpersonnelle et animer le groupe classe.		FR [q2] [22.5h+22.5h] [4 Credits] 🌐
⌘ LAGRE2020Q	Comprendre l'adolescent en situation scolaire, Gérer la relation interpersonnelle et animer le groupe classe.		FR [q2] [22.5h+22.5h] [4 Credits] 🌐

## 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.

## MATH2A - Information

### Access Requirements

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

*Decree of 7 November 2013 defining the landscape of higher education and the academic organization of studies.*

*The admission requirements must be met prior to enrolment in the University.*

*Unless explicitly mentioned, the bachelor's, master's and licentiate degrees listed 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.***

#### SUMMARY

- [General access requirements](#)
- [Specific access requirements](#)
- [French language proficiency examination](#)
- [Reduced credit registration](#)
- [Open to adults](#)

### General access requirements

Secondary school teacher training (AESS) is open only to holders of a Master's (second-cycle) degree awarded within the French Community of Belgium or a degree obtained abroad and deemed [equivalent in accordance with this Decree](#), a European directive, an international convention or other legislation, subject to the same requirements.

Students in the final stages of a minimum 120-credit Master's degree at an institution in the French Community may simultaneously enrol for teacher training. However, students admitted on these terms cannot be officially accepted until they have obtained the necessary Master's degree.

### Specific access requirements

#### Conditions spécifiques d'admission

Le programme est accessible à tout étudiant détenteur d'une licence ou d'un master :

- en sciences mathématiques (MATH2M, MATH2M1) - accès direct
- en sciences physiques (PHYS2M, PHYS2M1) - sur accord de la faculté
- en ingénieur civil - sur accord de la faculté
- en ingénieur architecte - sur accord de la faculté

**L'accord facultaire est nécessaire pour les diplômés d'une autre faculté que la Faculté des sciences. [Demande à introduire juste après avoir entamé les démarches d'inscription.](#)** Les étudiants souhaitant une admission sur dossier sont invités à consulter les [critères d'évaluation des dossiers](#).

Même lorsque l'admission à l'agrégation est autorisée, la maîtrise des matières disciplinaires sera évaluée avant de débiter les stages.

En fonction de votre dossier d'admission, notamment des notes obtenues et du cursus suivi (en BAC et en Master), vous pouvez être amené.e.s à suivre, parallèlement aux 30 crédits de l'AESS, des UEs supplémentaires à hauteur de maximum 10 crédits.

L'étudiant qui souhaite s'inscrire à l'AESS devra être porteur d'un diplôme de la Communauté Française de Belgique (CFB) ; à défaut, il devra réussir l'examen de maîtrise de la langue française afin de démontrer qu'il a, dans sa communication orale et écrite, des compétences en langue française d'un niveau équivalent au niveau C1 du CECR ([Cadre européen commun de référence pour les langues](#)) (pour plus de précisions : <https://uclouvain.be/fr/etudier/inscriptions/emlf-aess.html>).

L'étudiant déjà détenteur d'un master 120 d'une finalité spécialisée ou approfondie qui souhaite obtenir une agrégation peut s'inscrire soit à ce programme d'agrégation isolée, soit au master à finalité didactique en sciences mathématiques.

### Procédures particulières d'admission et d'inscription

Outre l'inscription au rôle de l'UCLouvain (Halles universitaires, Service des inscriptions) > [Inscription et financement](#), les étudiants qui n'ont pas un accès direct sont d'[introduire un dossier au secrétariat de leur faculté](#).

## French language proficiency examination

Anyone not demonstrating [sufficient proficiency in French](#) will not be admitted to teacher training (AESS) examinations.

## Reduced credit registration

The teaching degree programme is 30 credits. Exceptionally, the faculty may grant certain students a dispensation to organise their studies differently, such as registering for a programme which may have fewer than 30 credits during an academic year. This dispensation is the subject of an agreement between the student and the faculty, drawn up at the time of registration and reviewed annually. Such dispensations may only be granted for duly attested professional, academic, social or medical reasons. Reasoned applications for a reduced programme must be submitted at the time of registration. They must contain a reduced programme proposal in accordance with faculty guidelines.

## Open to adults

On the Louvain-la-Neuve campus:

Some classes take place according to a staggered schedule. Cross-curricular classes and seminars are offered in several series with different schedules; students choose the series whose schedule suits them best.

On the Mons campus:

All classes-but not internships- take place according to a staggered schedule (weekday evenings and Saturdays)



## Specific professional rules

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Successful completion of the Teacher Training Certificate (upper secondary education) leads to the award of the title of secondary school education specialist.

The [Réforme des Titres et Fonctions](#) ("Titles and Functions Reform"), in force since 1 September 2016, is intended to harmonise the titles, functions and pay scales of basic and secondary education professionals in French Community of Belgium networks.

It also aims to guarantee the priority of preferred titles over minimum titles and to establish a regime for titles in short supply.

AESS holders can learn which functions they can carry out and the pay scales from which they can benefit by [clicking here](#).

The university cannot be held responsible for any problems that students may encounter at a later date with a view to a teaching appointment in the French Community of Belgium.

## Teaching method

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Le programme se partage entre plusieurs types d'activités : des cours magistraux, des séminaires en petits groupes interdisciplinaires ou intradisciplinaires et une variété de stages (observation de pratiques enseignantes dans des classes, immersion durant 2 ou 3 journées dans une institution scolaire, pratiques d'enseignement en duo ou solo dans différentes classes et diverses filières d'enseignement).

L'implication active de l'étudiant dans la construction de ses savoirs est particulièrement sollicitée dans la réalisation et l'analyse de ses stages, dans les séminaires organisés en petits groupes et d'une manière générale dans les travaux individuels et de groupe qui fondent l'évaluation de plusieurs enseignements.

La charge de travail liée à l'ensemble du programme (aux 40 heures de stage d'enseignement notamment) est importante, elle exige un investissement sur une année académique. Elle n'est pas compatible avec la réalisation d'un autre programme pour plus de 30 crédits.

## 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".**

## Contacts

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### Curriculum Management

Entity

Structure entity

Denomination

Faculty

Sector

Acronym

Postal address

SST/SC/CAFC

[\(CAFC\)](#)

Faculty of Science [\(SC\)](#)

Sciences and Technology [\(SST\)](#)

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Jury

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- Study advisor: [Laure Ninove](#)

Useful Contact(s)

- Administrative manager for the student's annual program: [Catherine De Roy](#)

