

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

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

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

Activities on other sites : **NO**

Main study domain :

CHIM2M - Introduction

Introduction

Introduction

This master's degree trains top-level scientists able to solve contemporary problems linked to chemistry; it provides a solid theoretical formation and develops experimental ability, synthetic and critical way of thinking, as well as the rigour of scientific reasoning and expression.

The completion of a final year dissertation (master thesis) in one of the laboratories of the Institute of Condensed Matter and Nanosciences or the Institute of Biomolecular Science and Technology furthermore constitutes an initiation to research, opening the door to a potential doctorate.

Your profile

You

- want to help solve the great challenges of our time by creating new molecules with novel properties
- would like to work in university or public research institutes, in industrial laboratories,
- wish to develop experimental tools and sharp knowledge in advanced chemistry,
- envision to teach chemistry in upper secondary education classes.

Your future job

Chemistry is constantly developing and offers many job prospects. Industry is one of the largest employers: petrochemicals, pharmaceuticals, biotechnology, plastics and polymers, paint manufacturing, cosmetics, dyes, waste recycling, etc.

The chemist also puts his-her skills at the service of research (research institutes or industrial laboratories). Chemistry also opens

CHIM2M - Teaching profile

Learning outcomes

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

o deux cours parmi les quatre suivants : (6 credits)

⌘ LCHM2151	Advanced mass spectrometry	Charles-André Fustin	EN [q1] [22.5h+7.5h] [3 Credits] > French-friendly	X	X
⌘ LCHM2152	NMR Complements	Michael Singleton	EN [q1] [22.5h+7.5h] [3 Credits] > French-friendly	X	X
⌘ LCHM2122	Analysis physical methods of solids	Charles-André Fustin Yann Garcia	EN [q1] [30h] [3 Credits] > French-friendly	X	X
⌘ LBIR1346	Surface and colloid chemistry	Christine Dupont Aurélien vander Straeten (compensates Christine Dupont)	EN [q2] [30h] [3 Credits]	X	X

o Mémoire et séminaire (30 credits)

o LCHM2999	Master's thesis		EN [q2] [] [27 Credits] > French-friendly		X
o LCHM2290	Thesis tutorial	Ariane Halleux Olivier Riant	EN [q1] [15h] [3 Credits] > French-friendly		X

o Compétences transversales (2 credits)







o un cours de philosophie parmi

⌘ LSC2001	Introduction to contemporary philosophy	Peter Verdée Peter Verdée (compensates Charles Pence)	EN [q2] [30h] [2 Credits]	X	X
⌘ LSC2220	Philosophy of science	Alexandre Guay	EN [q2] [30h] [2 Credits]	X	X
⌘ LFILO2003E	Ethics in the Sciences and technics (sem)	Alexandre Guay (compensates Charles Pence) Hervé Jeanmart René Rezsohazy	EN [q2] [15h+15h] [2 Credits]	X	X
⌘ LTHEO2840	Science and Christian faith	Benoît Bourguine Paulo Jorge Dos Santos Rodrigues	EN [q1] [15h] [2 Credits]	X	X

o Cours au choix (19 credits)

⌘ Cours au choix recommandés pour les finalités approfondie et spécialisée

⌘ LBBMC2101	Structural and functional biochemistry	Pierre Morsomme Patrice Soumillion	EN [q1] [36h+6h] [4 Credits]	X	
⌘ LCHM2122	Analysis physical methods of solids	Charles-André Fustin Yann Garcia	EN [q1] [30h] [3 Credits] > French-friendly		X
⌘ LCHM2143	Physical organic chemistry	Raphaël Robiette	EN [q1] [22.5h+7.5h] [3 Credits] > French-friendly		

				Year	
				1	2
⌘ LCHM2252	Crystal engineering and crystallization processes	Tom Leysens	EN [q2] [45h+15h] [6 Credits]  > French-friendly		x
⌘ LCHM2260	Electrochemical Energy storage	Alexandru Vlad	EN [q1] [22.5h] [3 Credits]  > French-friendly		x
⌘ LCHM2261A	Polymer Chemistry and Physical Chemistry (part 1 : Polymer Chemistry)	Charles-André Fustin Jean-François Gohy Alain Jonas	EN [q1] [22.5h+7.5h] [3 Credits]  > French-friendly		x
⌘ LCHM2261B	Polymer Chemistry and Physical Chemistry (part 2 : Polymer Physical Chemistry)	Charles-André Fustin Jean-François Gohy Alain Jonas	EN [q1] [22.5h+7.5h] [2 Credits]  > French-friendly		x
⌘ LCHM2281	Photochemistry	Ludovic Troian-Gautier	EN [q2] [22.5h+7.5h] [3 Credits]  > French-friendly	x	x
⌘ LMAPR2012	Polymers for advanced technologies	Sophie Demoustier Karine Glinel Jean-François Gohy Bernard Nysten	EN [q2] [45h+15h] [5 Credits]  > French-friendly		

LIST OF FOCUSES

Three focused orientations are proposed that should be selected in view of your professional intentions at the end of your studies:

- « in-depth chemistry »: internship will be realized in a research laboratory ;
- « specialized : chemical industry »: internship will be realized in a company active in the chemical field ;
- « didactic »: this direction leads to the teaching profession.

However, this focus is not limiting for your future professional career as it only concerns 30 credits; employment opportunities and your future choices will be equally important.

> [Research Focus](#) [en-prog-2024-chim2m-lchim200a]

> [Teaching Focus](#) [en-prog-2024-chim2m-lchim200d]

> [Professional Focus : Industrial Chemistry](#) [en-prog-2024-chim2m-lchim200s]

RESEARCH FOCUS [30.0]

- 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 (obje88.598.598.5n[()]) TJ 1 0 0 -1 281.30499268 8s0490 -1 26 96...

PROFESSIONAL FOCUS : INDUSTRIAL CHEMISTRY [30.0]

- 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...)

Year

1 2

o Content:

● LCHM2275	Stage en entreprise		EN [q2] [] [30 Credits] 🌐 > French-friendly	x	
------------	---------------------	--	--	---	--

OPTIONS

- > [Optional courses](#) [en-prog-2024-chim2m-lsc100o]
- > [INEO, Interdisciplinary training in entrepreneurship](#) [en-prog-2024-chim2m-lboe955o]

OPTIONAL COURSES

- 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...)

These credits are not counted within the 120 required credits.

Year

1 2

o Content:

⊗ LSST1001	IngénieuxSud	Stéphanie Merle Jean-Pierre Raskin	FR [q1+q2] [15h+45h] [5 Credits] 🌐	x	x
⊗ LSST1002M	Information and critical thinking - MOOC	Anne Bauwens (compensates Jean-François Rees) Myriam De Kesel	FR [q2] [30h+15h] [3 Credits] 🌐	x	x

Course prerequisites

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

For each UCLouvain training programme, a [reference framework of learning outcomes](#) specifies 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.

CHIM2M - 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.

SUMMARY

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

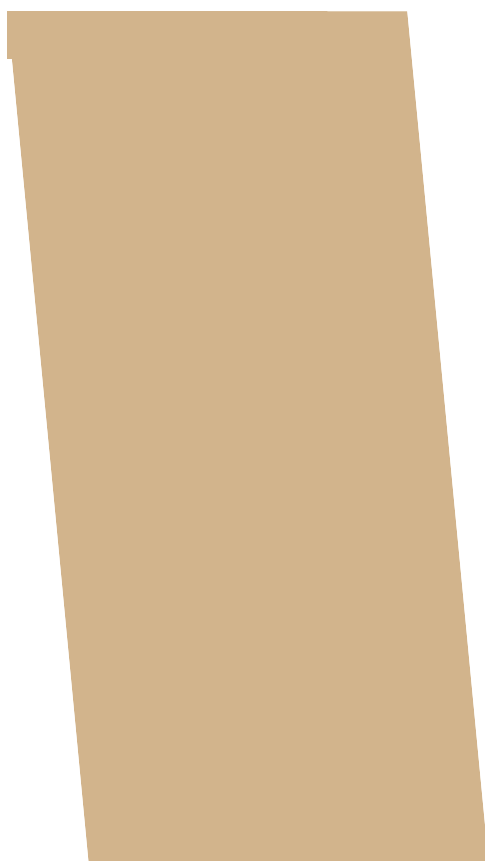
Specific access requirements

Since this program is taught in English, no prior proof of French language proficiency is required, except for students wishing to access the didactic program who must provide proof of a CEFR level C1 proficiency.

If the candidate lacks any prerequisites, additional refresher courses may be required. These will be taught in French. If there is no proof of sufficient knowledge of French, the application will not be considered

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



Non university Bachelors

> Find out more about [links](#) to the university

Diploma	Access	Remarks
BA en chimie, orientation biochimie - crédits supplémentaires entre 45 et 60	Les enseignements supplémentaires éventuels peuvent être consultés dans le module complémentaire .	Type court
BA en chimie, orientation biotechnologie - crédits supplémentaires entre 45 et 60		
BA en chimie, orientation chimie appliquée - crédits supplémentaires entre 45 et 60		
BA en chimie, orientation environnement - crédits supplémentaires entre 45 et 60		

Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	Remarks
"Licenciés"			
		Direct access	
Masters			
		Direct access	

Holders of a non-University 2nd cycle degree

Access based on validation of professional experience

> It is possible, under certain conditions, to use one's personal and professional experience to enter a university course without having the required qualifications. However, validation of prior experience does not automatically apply to all courses. Find out more about [Validation of priori experience](#).

Access based on application

Access based on application : access may be granted either directly or on the condition of completing additional courses of a maximum of 60 ECTS credits, or refused.

The first step in the procedure is to submit a file online (see <https://uclouvain.be/en/study/inscriptions/futurs-etudiants.html>).

Students who wish to be admitted on the basis of a dossier are invited to consult the [criteria for the evaluation of application](#).

Admission and Enrolment Procedures for general registration

Specific professional rules

Successful completion of the master's course with **teaching focus** leads to the award of the master's degree with teaching focus and 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

The program has been built as to

- maintain a reasonable volume of activities, compatible with the realization of a master thesis and a research training that properly prepares for the doctorate.
- promote interdisciplinarity (integrated practical works) and develop scientific communication skills (bibliographic research, presentation of seminars in French and English).

Students of the Didactic Finality may pursue a didactic deepening in biological, mathematical, physical or geographic sciences. For this specialization a in depth knowledge of the French language is required.

Evaluation

The evaluation methods comply with the [regulations concerning studies and exams](#). More detailed explanation of the

