

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 up career opportunities in education, computer science, banking and insurance and other sometimes unsuspected professions. The environment is now an increasingly demanding sector.

Your programme

This master offers you

- a solid theoretical training in the fundamental orientations of chemistry ;
- high experimental and advanced research skills in chemistry;
- great freedom in setting up your program;
- an opportunity to test your skills in the field, in a research lab, in industry or in a high school class;
- the possibility of completing your internship or part of your Master's degree abroad.

CHIM2M - Teaching profile

Learning outcomes

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

1. Maitriser un ensemble de « savoirs scientifiques » permettant de résoudre des problématiques chimiques complexes

- 8.1 Faire preuve de l'acquisition des approches méthodologiques et technologiques de pointe en relation avec les pratiques du monde de l'entreprise
- 8.2 Utiliser les compétences acquises au cours du Master dans un environnement nouveau et porteur au sein d'une entreprise au sens large

x

				Year	
				1	2
⌘ LCHM2247	Supramolecular chemistry	Charles-André Fustin Michael Singleton	EN [q2] [22.5h+7.5h] [3 Credits]  > French-friendly		x
⌘ LCHM2251	Structural chemistry by diffraction methods	Yaroslav Filinchuk	EN [q1] [22.5h+7.5h] [3 Credits]  > French-friendly		x
⌘ LCHM2252	Crystal engineering and crystallization processes	Tom Leysens	EN [q2] [45h+15h] [6 Credits]  > French-friendly		x

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-2023-chim2m-lchim200a]
- > [Teaching Focus](#) [en-prog-2023-chim2m-lchim200d]
- > [Professional Focus : Industrial Chemistry](#) [en-prog-2023-chim2m-lchim200s]

RESEARCH FOCUS [30.0]

- Mandatory
- ⊗ Optional
- △ Not offered in 2023-2024
- ⊙ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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:

⊗ LCHM2295

o Content:

o Module concevoir, planifier et évaluer des pratiques d'enseignement et d'apprentissage

o LSCI2320	Didactics and epistemology of science	Myriam De Kesel (coord.) Gabriel Dias de
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***INEO (EX-CPME), INTERDISCIPLINARY TRAINING IN
ENTREPRENEURSHIP***

- Mandatory
- ⌘ Optional
- △ Not offered in 2023-2024
- ⊙ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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...)

⌘ LMAT1101	Mathematics 1	Pedro Dos Santos Santana Forte Vaz	FR [q1] [30h+20h] [4 Credits] 🌐
⌘ LMAT1102	Mathematics 2	Augusto Ponce	FR [q2] [30h+30h] [4 Credits] 🌐
⌘ LCHM1252	Elements of physical molecular chemistry	Marc de Wergifosse	FR [q2] [45h+22.5h] [6 Credits] 🌐
⌘ LCHM1331	Inorganic chemistry I	Sophie Hermans	FR [q1] [37.5h+7.5h] [4 Credits] 🌐
⌘ LCHM1321	Analytical chemistry 1	Christine Dupont Yann Garcia	FR [q1] [40h] [5 Credits] 🌐
⌘ LCHM1351	Physical chemistry	Tom Leyssens	FR [q1] [45h+19h] [5 Credits] 🌐
⌘ LCHM1311	Environmental chemistry	Alexandru Vlad	EN

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

BA en chimie, orientation biochimie - crédits supplémentaires
entre 45 et 60

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

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](https://uclouvain.be/fr/decouvrir/rgee.html) (https://uclouvain.be/fr/decouvrir/rgee.html). More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".

The student will be evaluated mainly on the basis of his or her personal work (reading, consulting bibliographic databases and references, writing reports, presenting seminars, dissertation, internship, etc.).

The student will also be assessed on his capacity to assimilate the various courses. Where possible, evaluation will be continuous, including regular "open book" tests. The evaluation of the thesis will be done in two stages: during a progress report meeting and during the final presentation.

In order to obtain the average note, the grades obtained for the teaching units are weighted by their respective credit value.

If a student enrolled in a January examination has not been able to present the examination for duly justified reasons ("force majeure"), he may apply to the President of the Jury for permission to present the examination in June. The President of the Jury shall judge the relevance of the application and, if the course holder agrees, may authorize the student to present the examination in June.

Mobility and/or Internationalisation outlook

Two mobility schemes (30 credits) are provided for in the Master's in-depth program:

- Erasmus-Socrates or Mercator research internship outside Belgium, or internship in another Belgian institution, including courses or practical work (according to agreements to be negotiated with the host institution)
- An internship (15 credits) in a UCLouvain laboratory different from the one where the thesis will be carried out, and practical work complements to familiarize the student with the main techniques in the different orientations of chemistry (15 credits, 180 hours, or 4.5 weeks).

In the specialised master's program, the same principle of mobility of 30 or 15 credits will be possible, with a preference for an internship in an industrial company, Belgian or foreign.

The mobility is ideally performed in the 2nd term of the 1st year. Master thesis and complementary training are the focus of the 2nd year of the master degree.

The list of destinations as well as the arrangements for organizing international mobility are available at <https://uclouvain.be/fr/facultes/sc/programmes-d-echange-d-etudiants.html> (https://uclouvain.be/fr/facultes/sc/programmes-d-echange-d-etudiants.html)

Possible trainings at the end of the programme

Whatever focus is chosen, the Master in Chemistry gives direct access to the doctorate in science.

Contacts

Additional information

You will find additional information

- on the website of the School of Chemistry <https://uclouvain.be/fr/facultes/sc/chim>
- on the website of the Faculty of Science <https://uclouvain.be/en/faculties/sc>

Curriculum Management

Entity

Structure entity

Denomination

Faculty

Sector

SST/SC/CHIM

(CHIM)

Faculty of Science (SC)

