UCLouvain

CHIM1BA

2023 - 2024

Bachelor in Chemistry

At Louvain-la-Neuve - 180 credits - 3 years - Day schedule - In French
Dissertation/Graduation Project : **NO** - Internship : **NO**
Activities in English: **NO** - Activities in other languages : **NO**
Activities on other sites : **NO**
Main study domain : **Sciences**
Organized by: **Faculty of Science (SC)**
Programme acronym: **CHIM1BA** - Francophone Certification Framework: 6

Table of contents

CHIM1BA - Introduction

Introduction

CHIM1BA - Teaching profile

Learning outcomes

The programme aims at :

- the acquisition of general knowledge and skills in the principal subjects of the Exact Sciences (Biology, Chemistry, Mathematics and Physics) and a deepening of the basic knowledge and skills in the various domains of Chemistry
- the acquisition of rigour in reasoning and in written and oral expression, a critical spirit and the capacity to solve scientific problems, particularly those relevant to the disciplines of Chemistry
- the acquisition of transversal skills (Human Sciences, computing, management, English, written and oral communication), with a view to enhancing the generalist character of the training programme as well as the chances of getting a foot-hold on the job market upon successful completion of the studies.

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

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

1.1 Identifier et utiliser de manière critique les connaissances « essentielles » des sciences fondamentales : biologie, chimie, mathématique, physique pour résoudre une problématique donnée

1.2 Identifier et utiliser de manière critique les savoirs « spécialisés » de la chimie : organique, inorganique, analytique, physique pour résoudre un problème complexe de chimie.

2. Réaliser une démarche scientifique, théorique ou expérimentale, complète appliquée à l'appréhension, à l'analyse ou au développement d'une réaction chimique

2.1 Définir une problématique en des termes scientifiques rigoureux

2.2 Intégrer les connaissances acquises pour la formulation du problème en termes d'hypothèses permettant de proposer une solution pertinente au problème de chimie posé

2.3 Etablir les relations structures-propriétés pour une molécule donnée

2.4 Maîtriser les techniques expérimentales fondamentales de la chimie

2.5 Synthétiser, isoler et purifier au laboratoire une molécule donnée et quantifier sa concentration en répétant des modes opératoires décrits précédemment

2.6 Evaluer le risque lié à la réalisation au laboratoire d'une réaction chimique et veiller à la sécurité de l'environnement et des personnes dans le respect des règles de l'art de la chimie.

3. Communiquer oralement et par écrit en français et en anglais en vue de mener à son terme un projet scientifique en chimie

3.1 Formuler des conclusions pour la rédaction rigoureuse d'un rapport dans un esprit de synthèse (en français).

3.2 Rédiger des documents techniques en chimie (en français et en anglais)

3.3 Communiquer à ses pairs sous forme synthétique, graphique et schématique les résultats d'un projet scientifique (en français).

4. Apprendre et agir de manière autonome

4.1 Intégrer de manière autonome de nouvelles connaissances et compétences

4.2 Gérer de façon autonome sa formation et l'organisation de son travail

4.3 S'auto-évaluer en connaissant ses compétences et les limites de sa propre expertise

5. Faire preuve d'analyse critique et de rigueur scientifique

5.1 Analyser et exploiter des documents scientifiques et techniques en vue de résoudre une problématique de chimie.

5.2 Témoigner d'une ouverture d'esprit, accepter des approches innovantes pour résoudre des problèmes de chimie

5.3 Critiquer une démarche expérimentale et proposer des améliorations

5.4 Rassembler et traiter des données scientifiques pertinentes (en français et anglais) et en faire l'analyse critique

5.5 Citer et référencer son travail conformément aux standards du monde scientifique, sans plagiat

Programme structure

The progressive orientation of the programme starts as from the first year of polyvalent studies. The programme in the first year focuses on the acquisition of basic knowledge in the sciences (Mathematics, Physics, Chemistry, Biology, Earth Sciences).

Upon successful completion of the first year, the students may re-orientate their studies, without the need for any complementary subjects, to the second year of the bachelor's of Biological Sciences and of Bio-engineering subject to taking an extra course in Geography (GEO 1111) and also of Geographical Sciences.

From the second year on, besides the major in Chemistry, the students will choose a minor or complete their programme with courses selected from among those on offer. There is a minor in Biology. The students may also choose another minor based on a project to be elaborated with the approval of the study advisor.

The possibility of selecting options helps the students to prepare for their future orientation.

Students are given the opportunity to elaborate a personal work project and to write a report summarising it.

Ongoing evaluations are organised with special attention paid to interdisciplinary comprehension of the subject matters.

Principal Subjects

Biochemistry (9 credits)

Biology (11 credits)

General Chemistry (16 credits)

Inorganic and Analytical Chemistry (17 credits)

Organic Chemistry (19 credits)

Physical Chemistry (12 credits)

The Chemistry of Polymers (2 credits)

Cristallography and Mollecular Spectroscopy (8 credits)

Quantitative Processing of Chemical data (3 credits)

General Mathematics (18 credits)

General Physics (20 credits)

Earth Sciences (6 credits)

English (6 credits)

Human Sciences (5 credits)

Computing tools and Documentary Research or project (3 credits)

CHIM1BA Programme

Detailed programme by subject

- 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...)

Majeure (150 credits)

				Year 1	2	3
Biochimie (9 credits)						
LCHM1271	Elements of biochemistry	Patrice Soumillion	FR [q1] [30h+24h] [4 Credits]		x	
LCHM1371	Metabolic biochemistry	Melissa Page	EN [q2] [30h+30h] [5 Credits] > *French-friendly*			x
Chimie générale (19 credits)						
LCHM1111	General chemistry	Benjamin Elias Alexandru Vlad	FR [q1] [45h+67.5h] [11 Credits]	x		
LCHM1211	General Chemistry 2	Yann Garcia Tom Leyssens	FR [q2] [45h+60h] [8 Credits]		x	
Chimie inorganique et analytique (17 credits)						
LCHM1231	Elements of inorganic and analytical chemistry	Sophie Hermans	FR [q2] [30h+50h] [5 Credits]		x	
LCHM1331	Inorganic chemistry I	Sophie Hermans	FR [q1] [37.5h+7.5h] [4 Credits]			x
LCHM1321	Analytical chemistry 1	Christine Dupont Yann Garcia	FR [q1] [40h] [5 Credits]			x
LCHM1322	Exercises in analytical chemistry	Yann Garcia	FR [q1] [0h+66h] [3 Credits]			x
Chimie organique (23 credits)						
LCHM1141	Organic chemistry	Benjamin Elias (coord.) Charles-André Fustin	FR [q2] [30h+40h] [7 Credits]	x		
LCHM1244	Organic chemistry 2: deepening of basic concepts	Olivier Riant	FR [q1] [30h+22.5h] [4 Credits]		x	
LCHM1245	Organic Chemistry 2: Heteroatomic Chemistry	Michael Singleton	FR [q2] [30h+47.5h] [5 Credits]		x	
LCHM1341	Organic chemistry III	Raphaël Robiette	FR [q2] [30h+15h] [4 Credits]			x
LCHM1342	Exercises in organic chemistry I	Raphaël Robiette Michael Singleton	FR [q2] [0h+65h] [3 Credits]			x
Chimie physique (14 credits)						
LCHM1252	Elements of physical molecular chemistry	Marc de Wergifosse	FR [q2] [45h+22.5h] [6 Credits]		x	
LCHM1351	Physical chemistry	Tom Leyssens	EN [q1] [45h+19h] [5 Credits]			x
LCHM1352	Physical methods of chemistry	Tom Leyssens	FR [q2] [0h+60h] [3 Credits]			x
Chimie des polymères (3 credits)						
LCHM1361	Introduction to polymer chemistry	Jean-François Gohy	FR [q2] [22.5h] [3 Credits]			x
Cristallographie et spectroscopie moléculaire (8 credits)						
LCHM1253	Elements of crystallography	Yaroslav Filinchuk	EN [q1] [30h+10h] [4 Credits]		x	
LCHM1254	Elements of molecular spectroscopy	Sophie Hermans	EN [q2] [30h+20h] [4 Credits]		x	

				Year 1	2	3

Chimie des matériaux (5 credits)

LCHM1319	Material's chemistry	Charles-André Fustin Alexandru Vlad	FR [q2] [45h] [5 Credits]			x

Mathématiques (8 credits)

LMAT1101	Mathematics 1	Pedro Dos Santos Santana Forte Vaz	FR [q1] [30h+20h] [4 Credits]	x		
LMAT1102	Mathematics 2	Augusto Ponce	FR [q2] [30h+30h] [4 Credits]	x		

Biologie (14 credits)

LBIO1110	Life : diversity and evolution	Michel Baguette (compensates Caroline Nieberding) Patrick Dumont	FR [q1] [30h+10h] [4 Credits]	x		
LBIO1111	Cell and molecular biology	Patrick Dumont Charles Hachez	FR [q1] [30h+20h] [5 Credits]	x		
LBIO1112	Organism biology : plants and animals	André Lejeune Jean-François Rees	FR [q2] [30h+20h] [5 Credits]	x		

Physique (13 credits)

LPHY1101	Physics 1	Michel Crucifix Thierry Fichefet	FR [q1] [30h+40h] [6 Credits]	x		
LPHY1102	Physics 2	Vincent Lemaitre	FR [q2] [54h+36h] [7 Credits]	x		

Sciences de la terre (5 credits)

LBIR1130	Introduction to Earth sciences	Pierre Delmelle (coord.) Sophie Opfergelt	FR [q2] [30h+30h] [5 Credits]	x		

Anglais (8 credits)

LANG1861	English: reading and listening comprehension of scientific texts	Catherine Avery (coord.) Fanny Desterbecq Amandine Dumont (coord.) Marc Piwnik	EN [q2] [10h] [2 Credits]	x		
LANG1862	English: reading and listening comprehension of scientific texts	Ahmed Adrioueche (coord.) Catherine Avery Amandine Dumont Ariane Halleux (coord.)	EN [q1] [30h] [3 Credits]		x	
LANG1863	English for Students in Sciences (Upper-Intermediate level)	Ahmed Adrioueche (coord.) Catherine Avery (coord.) Amandine Dumont (coord.) Sandrine Jacob (coord.) Nevin Serbest Florence Simon Françoise Stas (coord.)	EN [q1 or q2] [30h] [3 Credits]			x

Sciences humaines

Philosophie

L'étudiant·e choisit

From 2 to 4credit(s)

⊠ LFILO1250A	Logic (partim)	Peter Verdée	FR [q2] [45h] [4 Credits] *> English-friendly*			x
⊠ LSC1120A	Philosophy	Charles Pence	FR [q1] [45h] [2 Credits]			x

Sciences religieuses (2 credits)

L'étudiant·e choisit 2 crédits parmi les cours suivants

				Year 1	2	3
⊠ LTECO2100	Sociétés, cultures, religions : Biblical readings	Hans Ausloos	FR [q1] [15h] [2 Credits]		x	
⊠ LTECO2200	Societies-cultures-religions : Human Questions	Régis Burnet	FR [q1] [15h] [2 Credits]		x	
⊠ LTECO2300	Societies, cultures, religions : Ethical questions	Marcela Lobo Bustamante	FR [q1] [15h] [2 Credits]		x	

⊠ Optional courses

These credits are not counted within the 120 required credits.

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

Minor or additional module (30 credits)

L'étudiant complète sa formation en choisissant un approfondissement ou une mineure dans la liste proposée pour le bachelier en sciences chimiques. Il répartit les unités d'enseignement dans le 2e et le 3e bloc annuel, de manière à ce que son programme annuel totalise 60 crédits.

Remarque : La mineure en sciences biomédicales se donnant sur le site de Woluwé, les étudiants qui souhaitent l'intégrer à leur programme devront faire face à des problèmes organisationnels (conflits horaires, …)

Maximum 1 element(s)

List of available minors

The students can choose a minor from the list belowor or can opt for another minor on the University programme, based on a project to be elaborated together with the study advisor.

> Minor in Biology *[en-prog-2023-minbiol]*
> Additionnal module in Chemistry *[en-prog-2023-appchim]*
> Minor in Criminology *[en-prog-2023-mincrim]*
> Minor in Culture and Creation *[en-prog-2023-mincucrea]*
> Minor in Scientific Culture *[en-prog-2023-mincults]*
> Minor in Development and Environment *[en-prog-2023-mindenv]*
> Minor : Issues of Transition and Sustainable Development (*) *[en-prog-2023-mindd]*
> Minor in Gender Studies *[en-prog-2023-mingenre]*
> Minor in entrepreneurship (*) *[en-prog-2023-minmpme]*
> Minor in Economics (open) *[en-prog-2023-minoeco]*
> Minor in numerical technologies and society *[en-prog-2023-minstic]*
> Minor in Geography *[en-prog-2023-mingeog]*
> Minor in Statistics, Actuarial Sciences and Data Sciences *[en-prog-2023-minstat]*
> Mineure Polytechnique *[en-prog-2023-minpoly]*

(*) This programme is the subject of access criteria

Course prerequisites

The **table** below lists the activities (course units, or CUs) for which there are one or more prerequisites within the programme, i.e. the programme CU for which the learning outcomes must be certified and the corresponding credits awarded by the jury before registering for that CU.

These activities are also identified **in the detailed programme**: their title is followed by a yellow square.

Prerequisites and student's annual programme

As the prerequisite is for CU registration puposes only, there are no prerequisites within a programme year. Prerequisites are defined between CUs of different years and therefore influence the order in which the student will be able to register for the programme's CUs.

In addition, when the jury validates a student's individual programme at the beginning of the year, it ensures its coherence, meaning that it may:

- require the student to combine registration in two separate CUs which it considers necessary from a pedagogical point of view.
- transform a prerequisite into a corequisite if the student is in the final year of a degree course.

For more information, please consult the Academic Regulations and Procedures.

 # Prerequisities list

LANG1862 "English: reading and listening comprehension of scientific texts" has prerequisite(s) LANG1861

- LANG1861 - English: reading and listening comprehension of scientific texts

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.

Detailed programme per annual block

CHIM1BA - 1ST ANNUAL UNIT

- 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...)

Majeure

Chimie générale

LCHM1111	General chemistry	Benjamin Elias Alexandru Vlad	[FR] [q1] [45h +67.5h] [11 Credits]

Chimie organique

LCHM1141	Organic chemistry	Benjamin Elias (coord.) Charles-André Fustin	[FR] [q2] [30h +40h] [7 Credits]

Mathématiques

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]

Biologie

LBIO1110	Life : diversity and evolution	Michel Baguette (compensates Caroline Nieberding) Patrick Dumont	FR [q1] [30h +10h] [4 Credits]
LBIO1111	Cell and molecular biology	Patrick Dumont Charles Hachez	FR [q1] [30h +20h] [5 Credits]
LBIO1112	Organism biology : plants and animals	André Lejeune Jean-François Rees	FR [q2] [30h +20h] [5 Credits]

Physique

LPHY1101	Physics 1	Michel Crucifix Thierry Fichefet	FR [q1] [30h +40h] [6 Credits]
LPHY1102	Physics 2	Vincent Lemaitre	FR [q2] [54h +36h] [7 Credits]

Sciences de la terre

LBIR1130	Introduction to Earth sciences	Pierre Delmelle (coord.) Sophie Opfergelt	FR [q2] [30h +30h] [5 Credits]

Anglais

LANG1861	English: reading and listening comprehension of scientific texts	Catherine Avery (coord.) Fanny Desterbecq Amandine Dumont (coord.) Marc Piwnik	EN [q2] [10h] [2 Credits]

CHIM1BA - 2ND ANNUAL UNIT

- 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...)

Majeure

Biochimie

LCHM1271	Elements of biochemistry	Patrice Soumillion	FR [q1] [30h +24h] [4 Credits]

Chimie générale

LCHM1211	General Chemistry 2	Yann Garcia Tom Leyssens	FR [q2] [45h +60h] [8 Credits]

Chimie inorganique et analytique

LCHM1231	Elements of inorganic and analytical chemistry	Sophie Hermans	FR [q2] [30h +50h] [5 Credits]

Chimie organique

LCHM1244	Organic chemistry 2: deepening of basic concepts	Olivier Riant	FR [q1] [30h +22.5h] [4 Credits]
LCHM1245	Organic Chemistry 2: Heteroatomic Chemistry	Michael Singleton	FR [q2] [30h +47.5h] [5 Credits]

Chimie physique

LCHM1252	Elements of physical molecular chemistry	Marc de Wergifosse	FR [q2] [45h +22.5h] [6 Credits]

Cristallographie et spectroscopie moléculaire

LCHM1253	Elements of crystallography	Yaroslav Filinchuk	FR [q1] [30h +10h] [4 Credits]
LCHM1254	Elements of molecular spectroscopy	Sophie Hermans	FR [q2] [30h +20h] [4 Credits]

Anglais

LANG1862	English: reading and listening comprehension of scientific texts	Ahmed Adrioueche (coord.) Catherine Avery Amandine Dumont Ariane Halleux (coord.)	EN [q1] [30h] [3 Credits]

Sciences humaines

Sciences religieuses

L'étudiant·e choisit 2 crédits parmi les cours suivants

⊠ LTECO2100	Sociétés, cultures, religions : Biblical readings	Hans Ausloos	FR [q1] [15h] [2 Credits]
⊠ LTECO2200	Societies-cultures-religions : Human Questions	Régis Burnet	FR [q1] [15h] [2 Credits]
⊠ LTECO2300	Societies, cultures, religions : Ethical questions	Marcela Lobo Bustamante	FR [q1] [15h] [2 Credits]

Minor or additional module

L'étudiant complète sa formation en choisissant un approfondissement ou une mineure dans la liste proposée pour le bachelier en sciences chimiques. Il répartit les unités d'enseignement dans le 2e et le 3e bloc annuel, de manière à ce que son programme annuel totalise 60 crédits.

Remarque : La mineure en sciences biomédicales se donnant sur le site de Woluwé, les étudiants qui souhaitent l'intégrer à leur programme devront faire face à des problèmes organisationnels (conflits horaires, …)

Maximum 1 element(s)

CHIM1BA - 3RD ANNUAL UNIT

- 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...)

Majeure

Biochimie

LCHM1371	Metabolic biochemistry	Melissa Page	FR [q2] [30h +30h] [5 Credits] > *French-friendly*

Chimie inorganique et analytique

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]
LCHM1322	Exercises in analytical chemistry	Yann Garcia	FR [q1] [0h +66h] [3 Credits]

Chimie organique

LCHM1341	Organic chemistry III	Raphaël Robiette	FR [q2] [30h +15h] [4 Credits]
LCHM1342	Exercises in organic chemistry I	Raphaël Robiette Michael Singleton	FR [q2] [0h +65h] [3 Credits]

Chimie physique

LCHM1351	Physical chemistry	Tom Leyssens	FR [q1] [45h +19h] [5 Credits]
LCHM1352	Physical methods of chemistry	Tom Leyssens	FR [q2] [0h +60h] [3 Credits]

Chimie des polymères

LCHM1361	Introduction to polymer chemistry	Jean-François Gohy	FR [q2] [22.5h] [3 Credits]

Chimie des matériaux

LCHM1319	Material's chemistry	Charles-André Fustin Alexandru Vlad	FR [q2] [45h] [5 Credits]

Anglais

LANG1863	English for Students in Sciences (Upper-Intermediate level)	Ahmed Adrioueche (coord.) Catherine Avery (coord.) Amandine Dumont (coord.) Sandrine Jacob (coord.) Nevin Serbest Florence Simon Françoise Stas (coord.)	EN [q1 or q2] [30h] [3 Credits]

Sciences humaines

Philosophie

L'étudiant·e choisit
From 2 to 4credit(s)

LFILO1250A	Logic (partim)	Peter Verdée	EN [q2] [45h] [4 Credits] > *English-friendly*
LSC1120A	Philosophy	Charles Pence	FR [q1] [45h] [2 Credits]

Optional courses

These credits are not counted within the 120 required credits.

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

Minor or additional module

L'étudiant complète sa formation en choisissant un approfondissement ou une mineure dans la liste proposée pour le bachelier en sciences chimiques. Il répartit les unités d'enseignement dans le 2e et le 3e bloc annuel, de manière à ce que son programme annuel totalise 60 crédits.

Remarque : La mineure en sciences biomédicales se donnant sur le site de Woluwé, les étudiants qui souhaitent l'intégrer à leur programme devront faire face à des problèmes organisationnels (conflits horaires, …)
Maximum 1 element(s)

CHIM1BA - Information

Access Requirements

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.

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

SUMMARY

General access requirements

Except as otherwise provided by other specific legal provisions, admission to undergraduate courses leading to the award of a Bachelor's degree will be granted to students with one of the following qualifications :

1. A Certificate of Upper Secondary Education issued during or after the 1993-1994 academic year by an establishment offering full-time secondary education or an adult education centre in the French Community of Belgium and, as the case may be, approved if it was issued by an educational institution before 1 January 2008 or affixed with the seal of the French Community if it was issued after this date, or an equivalent certificate awarded by the Examination Board of the French Community during or after 1994;

2. A Certificate of Upper Secondary Education issued no later than the end of the 1992-1993 academic year, along with official documentation attesting to the student's ability to pursue higher education for students applying for a full-length undergraduate degree programme;

3. A diploma awarded by a higher education institution within the French Community that confers an academic degree issued under the above-mentioned Decree, or a diploma awarded by a university or institution dispensing full-time higher education in accordance with earlier legislation;

4. A higher education certificate or diploma awarded by an adult education centre;

5. A pass certificate for one of the entrance examinations organized by higher education institutions or by an examination board of the French Community; this document gives admission to studies in the sectors, fields or programmes indicated therein;

6. A diploma, certificate of studies or other qualification similar to those mentioned above, issued by the Flemish Community of Belgium, the German Community of Belgium or the Royal Military Academy;

7. A diploma, certificate of studies or other qualification obtained abroad and deemed equivalent to the first four mentioned above by virtue of a law, decree, European directive or international convention;

Note:

Requests for equivalence must be submitted to the Equivalence department (Service des équivalences) of the Ministry of Higher Education and Scientific Research of the French Community of Belgium in compliance with the official deadline.

The following two qualifications are automatically deemed equivalent to the Certificate of Upper Secondary Education (Certificat d'enseignement secondaire supérieur – CESS):

- European Baccalaureate issued by the Board of Governors of a European School,

- International Baccalaureate issued by the International Baccalaureate Office in Geneva.

8. Official documentation attesting to a student's ability to pursue higher education (diplôme d'aptitude à accéder à l'enseignement supérieur - DAES), issued by the Examination Board of the French Community.

Specific access requirements

- Access to bachelor programmes for candidates of nationality outside the European Union who are not assimilated to Belgian nationals is subject to the following criteria:
  - not have obtained a secondary education diploma for more than 3 years maximum. Example: for an admission application for the academic year 2023-2024, you must have obtained your diploma during the academic years 2020-2021, 2021-2022 ou 2022-2023. In the French Community of Belgium, the academic year runs from September 14 to September 13
  - not already hold an undergraduate degree
- Candidates, whatever their nationality, with a secondary school diploma **from a country outside the European Union**, must have obtained an average of 13/20 minimum or, failing that, have obtained this average, have passed one year of study in Belgium (for example special Maths / sciences). A non-successful year will not be taken into consideration.

- For any secondary school diploma **from a European Union country**, the admission request must contain the equivalence of your diploma or, at the very least, proof of the filing of the equivalence request with the Wallonia-Brussels Federation (French Community of Belgium). For any information relating to obtaining an equivalence, please refer to the following site.
- For any secondary school diploma **from a country outside the European Union**, the admission application must contain the equivalence of your diploma issued by the Wallonia-Brussels Federation (French Community of Belgium). If you have a restrictive equivalence for the programme of your choice, in addition of it, you **must** have either the DAES or a certificate of successful completion of the examination giving access to 1st cycle studies when you submit your application

Access based on validation of professional experience

Admission to undergraduate studies on the basis of accreditation of knowledge and skills obtained through professional or personal experience (Accreditation of Prior Experience)

Subject to the general requirements laid down by the authorities of the higher education institution, with the aim of admission to the undergraduate programme, the examination boards accredit the knowledge and skills that students have obtained through their professional or personal experience.

This experience must correspond to at least five years of documented activity, with years spent in higher education being partially taken into account: 60 credits are deemed equivalent to one year of experience, with a maximum of two years being counted. At the end of an assessment procedure organized by the authorities of the higher education institution, the Examination Board will decide whether a student has sufficient skills and knowledge to successfully pursue undergraduate studies.

After this assessment, the Examination Board will determine the additional courses and possible exemptions constituting the supplementary requirements for the student's admission.

Special requirements to access some programmes

- Admission to **undergraduate studies in engineering: civil engineering and architect**

  Pass certificate for the special entrance examination for undergraduate studies in engineering: civil engineering and architect.

  Admission to these courses is always subject to students passing the special entrance examination. Contact the faculty office for the programme content and the examination arrangements.
- Admission to **undergraduate studies in veterinary medicine**

  Admission to undergraduate studies in veterinary medicine is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses (non-residents).
- Admission to **undergraduate studies in physiotherapy and rehabilitation**

  Admission to undergraduate studies in physiotherapy and rehabilitation is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses (non-residents).
- Admission to **undergraduate studies in psychology and education: speech and language therapy**

  Admission to undergraduate studies in psychology and education: speech and language therapy is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses (non-residents).
- Admission to **undergraduate studies in medicine and dental science**

  Admission to undergraduate studies in medecine and dental science is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses (non-residents).

  Note: students wishing to enrol for a **Bachelor's degree in Medicine** or a **Bachelor's degree in dental science** must first sit an aptitude test (fr).

Teaching method

Des séances sont organisées au cours de la première année autour des questions de méthode de travail, par exemple la gestion du temps ou la manière d'aborder les différentes matières.

Les exerices et laboratoires sont organisés en petits groupes et sont encadrés par des assistants. Les monitorats permettent à ceux qui le souhaitent de faire le point sur les matières vues au cours : les enseignants de chaque discipline répondent aux questions des étudiants et expliquent les points moins bien compris.

La plupart des enseignements disposent également d'un site internet ou est déposée une série d'informations utiles pour l'étude.

Des cours au choix permettent aux étudiants de préparer leur orientation future.

La possibilité de réaliser un travail personnel et d'en rédiger un rapport de synthèse est offerte aux étudiants.

Outre des rapports à remettre ou des contrôles de conssaissances au début de certaines séances de laboratoires, des interrogations obligatoires intervenant dans la note finale de chaque matière sont organisées après un mois de cours au premier quadrimestre.

Des évaluations continues sont mises en place avec une attention particulière sur la compréhension interdisciplinaire des matières.

Evaluation

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".

Différentes modalités sont mises en oeuvre pour l'évaluation des connaissances et des compétences acquises au cours de la formation; elles sont adaptées aux types de prestations : évaluation continue notamment pour les exercices pratiques, évaluation des travaux personnels et de groupe, évaluation globale (écrite et/ou orale) durant les sessions d'examens.

Mobility and/or Internationalisation outlook

International mobility is recommended rather within the framework of master programmes. In special cases, however, it is possible to consider international mobility at the end of the bachelor's degree.

Moreover, participation in a short mobility can be envisaged at the end of the bachelor's degree in the framework of the Athens network https://www.paristech.fr/fr/international/europe/athens

Possible trainings at the end of the programme

Positioning of the programme within the University cursus

The bachelor's degree in Chemical Sciences entitles automatic access to the master's programme in Molecular Chemistry, orientated towards the domains of applications, research or teaching.

Other studies accessible upon completion of the programme

If a minor in biology has been chosen, the bachelor's degree also access to the master's of Biochemistry and Molecular and Cellular Biology.

Contacts

Curriculum Management

Entity

Structure entity	SST/SC/CHIM
Denomination	(CHIM)
Faculty	Faculty of Science (SC)
Sector	Sciences and Technology (SST)
Acronym	CHIM
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Academic supervisor: Tom Leyssens

Jury

- President and Study advisor: Benjamin Elias
- Secretary: Marc de Wergifosse

Useful Contact(s)

- Administrative manager for the student's annual program: Nathalie Micha