



**BBMC2M**

*2024 - 2025*



## BBMC2M - Teaching profile

### Learning outcomes

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**Students on the Master in Biochemistry and Molecular and Cell Biology** programme must acquire knowledge and technical expertise which enable them to gain advanced understanding of and deal experimentally with issues relating to the structure, working and use for biotechnical purposes of living cells and their molecular components. Not only will they simply learn, but, more importantly, they will be able to learn independently

- as biochemists : how macromolecules work and develop, since they are the molecular foundations of the structure, functioning and programming of living beings;
- as molecular and cellular biologists : how, both as a single cell or as a component of multicellular organisms, cells interact, how they convert the special features and/or changes in their environment into biochemical and/or genetic regulation signals, how they grow, adapt, become differentiated and die.

7. understand ethical questions in life sciences

7.1 critically put into perspective the impact of science and technology on the evolution of societies

7.2 evaluate the ethical and societal issues of new biotechnologies and experimental practices in biology, involving, among other things, animal

The core study is taught in English with the exception of some social studies courses, English-speaking students are invited to take LSC2220.

- 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
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## ***LIST OF FOCUSES***

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The research focus is fully taught in English.

The professional focus is accessible to English-speaking students but they will have to choose their courses carefully because some are taught in French.

The teaching focus aims to teach in secondary education in the French Community of Belgium, therefore it is accessible only to students who have a good knowledge of French.

> [Research Focus](#) [ en-prog-2024-bbmc2m-lbbmc200a ]

> [Teaching Focus](#) [ en-prog-2024-bbmc2m-lbbmc200d ]

- 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:**

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

○ LBIO2310	Stages d'enseignement en biologie (en ce compris le séminaire d'intégration des stages)	Myriam De Kesel	(FR) [q1+q2] [15h+40h] [7 Credits] 🌐	X	X
○ LSCI2320	Didactics and epistemology of science	Myriam De Kesel (coord.) Marc de Wergifosse Gabriel Dias de Carvalho Junior	(FR) [q1] [22.5h] [2 Credits] 🌐	X	X
○ LBIO2340	Didactics and Epistemology of Biology	Myriam De Kesel	(FR) [q1+q2] [37.5h+0h] [4 Credits] 🌐	X	X
○ LAGRE2220	General didactics and education to interdisciplinarity	Stéphane Colognesi Severine De Croix Myriam De Kesel Jean-Louis Dufays Anne Ghysseleux Véronique Lemaire Benoît Vercruyse	(FR) [q1+q2] [37.5h] [3 Credits] 🌐	X	X

o **Une UE parmi les quatre suivantes (4 credits)**

⊗ LCHM2340	Didactics and epistemology of chemistry	Marc de Wergifosse (coord.) Nathalie Matthys	(FR) [q1+q2] [37.5h] [4 Credits] 🌐	X	X
⊗ LPHYS2471	Didactics and Epistemology of Physics	Gabriel Dias de Carvalho Junior	(FR) [q1+q2] [37.5h] [4 Credits] 🌐	X	X
⊗ LMAT2320A					



Year

1 2

LAGRE2020Q

Comprendre l'adolescent en situation scolaire, Gérer la relation interpersonnelle et animer le groupe classe.

Nathalie Roland  
Morgane Senden  
(compensates  
Baptiste Barbot)

PR [q2] [22.5h+22.5h] [4 Credits]

x

## PROFESSIONAL FOCUS : BIOTECHNOLOGY [30.0]

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- Mandatory
  - ✘ Optional
  - △ Not offered in 2024-2025
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  - ⊕ 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, ...)
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## OPTIONS

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- > [Elective courses](#) [ en-prog-2024-bbmc2m-lbbmc300o ]
- > [INEO, Interdisciplinary training in entrepreneurship](#) [ en-prog-2024-bbmc2m-lboe955o ]

## ELECTIVE COURSES [36.0]

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- 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]dents
-

				Year	
				1	2
✘ LBBMC2206	Internship - Part 2	Bernard Hallet René Rezsöházy	EN [q2] [10h+10h] [10 Credits] 🌐	X	X
✘ LB RTE2201	Human and environmental toxicology	Cathy Debier	EN [q1] [30h+7.5h] [4 Credits] 🌐 > French-friendly	X	X
✘ LBBMC2204	Cellular and molecular pharmacology - basic concepts	Melissa Page	EN [q1] [30h] [3 Credits] 🌐	X	X
✘ LBBMC2214	Molecular and cellular pharmacology seminar	Laure Bridoux (compensates René Rezsöházy) Patrick Dumont	EN [q2] [24h] [2 Credits] 🌐	X	X
✘ LDATS2360	Seminar in data management: basic	Céline Bugli	EN [q1] [15h+10h] [5 Credits] 🌐	X	X

### ✘ One of the other technical courses

✘ LBIRC2101	Biochemical analysis	François Chaumont Pierre Morsomme (coord.)	FR [q1] [22.5h+30h] [4 Credits] 🌐 > English-friendly	X	X
✘ LBRMC2101	Genetic engineering	François Chaumont (coord.) Charles Hachez	FR [q1] [37.5h+15h] [5 Credits] 🌐 > English-friendly	X	X
✘ LBRMC2202	Cell culture technology	David Alsteens Charles Hachez (coord.) Pascal Hols	EN [q1] [30h] [3 Credits] 🌐 > French-friendly	X	X

### ✘ Other courses of the deepening modules

#### ✘ Activities of the Master's degree in Biomedical Sciences at UCLouvain

#### ✘ Activities of the Master's degree in chemistry



#### ✘ Activities of the BBMC master's degree at UNamur

### ✘ Upgrading activities

✘ LBIO1237	Immunology : basis and applications in biology	Jean-Paul Dehoux	FR [q1] [25h+15h] [3 Credits] 🌐	X	X
✘ LBIO1322	Integrated tutorials in biochemistry and molecular biology	Bernard Hallet Patrice Soumillon	FR [q2] [5h+45h] [5 Credits] 🌐	X	X
✘ LBIO1333	Integrated animal biology: circulation, respiration, digestion and excretion	Patrick Dumont Françoise Gofflot René Rezsöházy	FR [q2] [30h+10h] [3 Credits] 🌐	X	X
✘ LBIO1342	Plant morphogenesis	François Chaumont	FR [q2] [20h+15h] [3 Credits] 🌐	X	X
✘ LBIO1240	Plant physiology	Xavier Draye Stanley Lutts	FR [q1] [40h+15h] [4 Credits] 🌐	X	X
✘ LBIO1332	Molecular Biology of Development	Françoise Gofflot René Rezsöházy	FR [q1] [30h+10h] [3 Credits] 🌐	X	X
✘ LBIO1236	Integrated animal biology : coordination, perception and locomotion	Frédéric Clotman (compensates Bernard Knoops) Patrick Dumont Patrick Dumont (compensates Bernard Knoops) Françoise Gofflot	FR [q2] [40h+10h] [4 Credits] 🌐	X	X
✘ LCHM1111B	General chemistry	Benjamin Elias Alexandru Vlad	FR [q1] [45h+45h] [8 Credits] 🌐	X	X
✘ LCHM1331	Inorganic chemistry I	Sophie Hermans	FR [q1] [37.5h+7.5h] [4 Credits] 🌐	X	X
✘ LCHM1321A	Analytical chemistry	Christine Dupont Yann Garcia	FR [q1] [30h] [3 Credits] 🌐	X	X
✘ LCHM1361	Introduction to polymer chemistry	Jean-François Gohy	FR [q2] [22.5h] [2 Credits] 🌐	X	X

				Year	
				1	2
⌘ LAGRE2310	Micro-teaching exercises	Marc Blondeau Pascalia Papadimitriou	EB [q1 or q2] [15h] [2 Credits]	x	x
⌘ LAGRE2221	Learning and teaching with new technologies	Sandrine Decamps	EB [q1] [15h+15h] [2 Credits]	x	x
⌘ LMAT2330	Seminar on the teaching of mathematics	Enrico Vitale	EB [q1+q2] [15h+30h] [4 Credits]	x	x

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**INEO, INTERDISCIPLINARY TRAINING IN ENTREPRENEURSHIP**

- Mandatory
- ⊗ Optional
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Click on the course title to see detailed informations (objectives, methods, evaluation...)

*This option lasts 2 years and is integrated into more than 30 Masters programs in 9 faculties/schools of the UCLouvain. The choice of this option implies the realization of an interfaculty dissertation (in team) on a business creation project. Access is limited to students selected on the basis of a portfolio. More info. via <https://uclouvain.be/en/study/ineo>*

*Admission to this CPME option is subject to selection, please submit your application in due time <https://uclouvain.be/fr/etudier/ineo/admission.html>*

*Courses in this option cannot be taken individually outside of the option.*

*From 20 to 25 credit(s)*

Year

1 2

**Content:**

⊗ LINEO2021	<b>Financer son projet</b> <i>Ce cours est obligatoire pour les étudiants qui n'ont pas de prérequis en gestion (les étudiants qui ont suivi la mineure en gestion, ou la mineure en esprit d'entreprendre sont dispensés de ce cours).</i>	Philippe Grégoire Olivier Vercrusse	FR [q2] [30h+15h] [5 Credits] 🌐	X
● LINEO2001	<b>Théorie de l'entrepreneuriat</b>	Frank Janssen	FR [q1] [30h+20h] [5 Credits] 🌐	X
● LINEO2002				

o **Additional courses**



## 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 skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's

## BBMC2M - 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

Diploma	Special Requirements	Access	Remarks
<b>UCLouvain Bachelors</b>			
BIOL1BA - Bachelier en sciences biologiques		Direct access	
CHIM1BA - Bachelier en sciences chimiques		<a href="#">Access based on application</a>	
		Direct access	
		Access with additional training	
SBIM1BA		Direct access	
Titre inconnu:lmed1ba		Direct access	Le choix des cours de 1ère année de master pourrait être adapté en fonction de la formation antérieure.
Titre inconnu:lvete1ba		Direct access	Le choix des cours de 1ère année de master pourrait être adapté en fonction de la formation antérieure.
<b>Others Bachelors of the French speaking Community of Belgium</b>			

être adapté en fonction de la  
formation antérieure.



## Specific professional rules

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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

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The teaching strategy takes its inspiration from the idea of taking responsibility for one's own learning and offers a wide range of learning situations. Students must take three major decisions: the choice of an option course, a focus and final additional training.

Approximately thirty credits are reserved for activities which can be freely chosen from the overall **Biochemistry and Molecular and Cell Biology** programme or from related Masters.

Teaching is organized in small groups, most frequently in tutorial style and learning is for the most part centred on individual work (e.g. reading, consultation of databases and bibliographic references, presentation of seminars and research work). Before making a final choice for the subject of the dissertation, students do a "rotation" in four laboratories relating to each of the four available option

## Contacts

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### Curriculum Management

#### Entity

Structure entity	SST/SC/BIOL
Denomination	<a href="#">(BIOL)</a>
Faculty	Faculty of Science <a href="#">(SC)</a>
Sector	Sciences and Technology <a href="#">(SST)</a>
Acronym	BIOL
Postal address	Croix du sud 4-5 - bte L7.07.05 1348 Louvain-la-Neuve Tel: <a href="tel:+32210473489">+32 (0) 10 47 34 89</a> - Fax: <a href="tel:+32210473515">+32 (0) 10 47 35 15</a> <a href="https://uclouvain.be/fr/facultes/sc/biol">https://uclouvain.be/fr/facultes/sc/biol</a>
Website	

Academic supervisor: [Pierre Morsomme](#)

#### Jury

- President: [Henri Batoko](#)
- Secretary and Study advisor: [Charles Hachez](#)

#### Useful Contact(s)

- Administrative manager for the student's annual program: [Aloysia Stephenne](#)

