



## BIOL2M1 - Introduction

### Introduction

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#### Introduction

This master's degree aims to train "generalist" biologists capable of understanding the scientific foundations of the functioning of living organisms.

#### Your future job

Biologists apply their knowledge and know-how, which are very versatile, in very different sectors: in scientific, fundamental or applied research in research institutes or private laboratories, in expertise and resource management in the private or public sector, in education, training and communication.

#### Your programme

The knowledge to be acquired is at two levels of complexity of living organisms: "biochemistry, molecular and cellular biology" on the one hand, and "biology of organisms and ecology" on the other hand, identified by two options. The programme consists mainly of activities borrowed from the first year of the Masters (120 credits) of the same name.

You can take this program entirely in English if you take the option "biochemistry, molecular and cellular biology".

## BIOL2M1 - Teaching profile

### Learning outcomes

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The Master in Biology (60 credits) is designed to train "generalist" biologists who can grasp the scientific foundations of how living organisms work. The knowledge they will acquire involves two different levels in the complexity of living organisms which also relate to two option courses: first, biochemistry, molecular and cellular biology, then biology of organisms and ecology. The programme is mostly made up of activities borrowed from the first year of the Master (120 credits) of the same name.

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

1. Mettre en œuvre une approche intégrative des processus fondamentaux régissant le vivant depuis la structure des cellules vivantes et de leurs composants moléculaires jusqu'à leur fonctionnement au sein d'un individu ou au fonctionnement et à l'évolution des populations et des écosystèmes, en fonction de l'option choisie.

1.1 témoigner d'une maîtrise des savoirs dans les domaines développés dans l'option choisie, à savoir

- en biochimie, biologie moléculaire et cellulaire,
- ou en biologie des organismes et écologie.

## Detailed programme by subject

### CORE COURSES [20.0]

- 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...)

#### ○ Travail de fin d'études (18 credits)

○ LBIOL2990	Mémoire	Pierre Morsomme (coord.)	FR [q1+q2] [] [18 Credits] 🌐
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#### ○ Philosophie, éthique (2 credits)

2 crédits à choisir parmi

⊗ LSC2001	Introduction to contemporary philosophy	Peter Verdée Peter Verdée (compensates Charles Pence)	FR [q2] [30h] [2 Credits] 🌐
⊗ LSC2220	Philosophy of science	Alexandre Guay	EN [q2] [30h] [2 Credits] 🌐
⊗ LFILO2003E	Ethics in the Sciences and technics (sem)	Alexandre Guay (compensates Charles Pence) Hervé Jeanmart René Rezsöhazi	FR [q2] [15h+15h] [2 Credits] 🌐
⊗ LTHEO2840	Science and Christian faith	Benoît Bourguine Paulo Jorge Dos Santos Rodrigues	FR [q1] [15h] [2 Credits] 🌐
⊗ ESSPS2101	Science, ethics and development		FR

## OPTIONS

The option in Biochemistry, Molecular and Cellular Biology is fully taught in English.

The option in Biology of Organisms and Ecology is mainly taught in French.

The student chooses an option and completes their program with elective courses.

- > [Option in Biochemistry, Molecular and Cellular Biology](#) [ en-prog-2024-biol2m1-lbiol210o ]
- > [Option in biology of organisms and ecology](#) [ en-prog-2024-biol2m1-lbiol211o ]
- > [Cours au choix](#) [ en-prog-2024-biol2m1-lbiol212o ]

## OPTION IN BIOCHEMISTRY, MOLECULAR AND CELLULAR BIOLOGY [24.0]

- 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, ...)

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### ○ Content:

#### ○ Cours obligatoires (11 credits)

○ LBBMC2101	<a href="#">Structural and functional biochemistry</a>	Pierre Morsomme Patrice Soumillion	EN [q1] [36h+6h] [4 Credits] 🌐
○ LBBMC2102	<a href="#">Integrated molecular and cellular biology</a>	Henri Batoko Bernard Hallet Pierre Morsomme Melissa Page	EN [q1] [30h] [3 Credits] 🌐
○ LBRMC2201	<a href="#">Bioinformatics : DNA and protein sequence analysis</a>	Michel Ghislain	EN [q1] [30h+15h] [4 Credits] 🌐 > French-friendly

#### ○ Techniques de biochimie et de biologie moléculaire




L'étudiant-e choisit une UE parmi :

Minimum 3 credit(s)

^1 BIRC2101	<a href="#">Biochemical analysis</a>	François Chaumont Pierre Morsomme (coord.)
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⌘ LBBMC2107	Microbial cellular physiology	Corentin Claeys Bouaert Stephan Declerck Benoît Desguin Pascal Hois Géraldine Laloux
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○ ESBOE2123	Freshwater Biodiversity (UNamur)		PK [q1] [12h+24h] [3 Credits] 
○ ESBOE2142	Ecology of natural and disturbed aquatic environments (UNamur)		PK [q1] [12h+20h] [2 Credits] 
○ ESBOE2144	Resource management in fisheries and aquaculture		PK [q1] [18h+12h] [3 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



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

Diploma	Access	Remarks
BA - technologue de laboratoire médical - crédits supplémentaires entre 45 et 60	Les enseignements supplémentaires éventuels peuvent être consultés dans le <a href="#">module complémentaire</a> .	Type court
BA en agronomie, orientation agro-industries et biotechnologies - crédits supplémentaires entre 45 et 60		
BA en agronomie, orientation agronomie des régions chaudes - crédits supplémentaires entre 45 et 60		
BA en agronomie, orientation environnement - crédits supplémentaires entre 45 et 60		
BA en agronomie, orientation forêt et nature - crédits supplémentaires entre 45 et 60		
BA en agronomie, orientation systèmes alimentaires durables et locaux - crédits supplémentaires entre 45 et 60		
BA en agronomie, orientation techniques et gestion agricoles - crédits supplémentaires entre 45 et 60		
BA en agronomie, orientation techniques et gestion horticoles - crédits supplémentaires entre 45 et 60		
BA en agronomie, orientation technologie animalière - crédits supplémentaires entre 45 et 60		
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		

## Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	Remarks
"Licenciés"		-	
Masters		-	

## 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



