UCLouvain

# BIOL2M1 - Introduction

## Introduction

### 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 progam entirely in English if you take the option "biochemistry, molecular and cellular biology".

# BIOL2M1 - Teaching profile

## Learning outcomes

## 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, ...)

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

### Content:

#### Cours obligatoires (11 credits)

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

| | | | |
|---|---|---|---|
| ⊠ LBBMC2107 | Microbial cellular physiology | Corentin Claeys Bouuaert<br>Stephan Declerck<br>Benoît Desguin<br>Pascal Hols<br>Géraldine Laloux<br>Pierre Morsomme | EN [q2] [36h+18h] [5 Credits] |
| ⊠ LBBMC2108 | Molecular genetics and plant genomics | Henri Batoko<br>François Chaumont<br>Xavier Draye | EN [q2] [36h+18h] [5 Credits] |
| ⊠ LBBMC2109 | Plant cell physiology | Henri Batoko<br>François Chaumont<br>Charles Hachez | EN [q2] [36h+18h] [5 Credits] |
| ⊠ LBBMC2110 | Animal and human molecular genetics and genomics | Françoise Gofflot<br>Nisha Limaye<br>René Rezsohazy | EN [q2] [36h+18h] [5 Credits] |
| ⊠ LBBMC2111 | Animal and human cellular physiology | Frédéric Clotman<br>Patrick Dumont | EN [q2] [36h+18h] [5 Credits] |

| | | | |
|---|---|---|---|
| ESBOE2123 | Freshwater Biodiversity (UNamur) | | FR [q1] [12h+24h] [3 Credits] |
| ESBOE2142 | Ecology of natural and disturbed aquatic environments (UNamur) | | FR [q1] [12h+20h] [2 Credits] |
| ESBOE2144 | Resource management in fisheries and aquaculture | | FR [q1] [18h+12h] [3 Credits] |

**⛒ Ecologie appliquée**

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|---|---|---|---|
| LBOE2166 | Lutte biologique | Claude Bragard<br>Thierry Hance | FR [q2] [12h+24h] [3 Credits] |
| LBOE2185 | Evolutionary applications | Hans Van Dyck | EN [q2] [20h] [2 Credits] |

## *COURS AU CHOIX*

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### *Content:*

#### Autres cours au choix

*L'étudiant·e peut compléter son programme avec des UE choisies dans la liste des cours du master 120 BOE et du master 120 BBMC à l'exception des cours des finalités didactiques, de LBOE2197, LBOE2297, LBOE2240, LBOE2241, LBOE2260, LBOE2261, LBOE2292, LBBMC2103, LBBMC2203, LBBMC2205, LBBMC2215, LBBMC2206, LBBMC2997, LBBMC2998 et LBBMC2201*

#### Activités de mise à niveau

*l'étudiant·e peut choisir, en accord avec le conseiller aux études, jusqu'à 6 crédits d'activités de mise à niveau parmi les cours du bachelier et de l'approfondissement en biologie.*

## Supplementary classes

***To access this Master, students must have a good command of certain subjects. If this is not the case, in the first annual block of their Masters programme, students must take supplementary classes chosen by the faculty to satisfy course prerequisites.***

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### Enseignements supplémentaires

## 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.

> Find out more about links to the university

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

## Holders of a 2nd cycle University degree

| Diploma |
|---|

## Teaching method

The teaching strategy takes its inspiration from the idea of "taking responsibility for one's own learning". In the core subjects, students have a choice between a series of activities in human sciences and may choose between many elective subjects. Learning is for the most part centred on individual work (e.g. reading, consultation of databases and bibliographic references, field and laboratory work).

## 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".***

Students will mainly be assessed on the basis of individual work (e.g. reading, consultation of databases and bibliographic references, writing monographs and reports, presentation of seminars, dissertation and field work). As far as possible, there will be continuous assessment, including regular 'open book examinations'. Some activities will not be given a precise mark but will be officially certified.

## Possible trainings at the end of the programme

Holders of the Master [60] in Biology with the option in biochemistry, molecular and cellular biology may go on to the Master [120] in Biochemistry and Molecular and Cell Biology (120 credits) with a further year of study and a more advanced master thesis.

Holders of the Master [60] in Biology with the option in biology of organisms and ecology may go on to the degree of Master [120] in Biology of Organisms and Ecology(120 credits) with a further year of study and a more advanced master thesis.

## Contacts

### Curriculum Management

Entity

| | |
|---|---|
| Structure entity | SST/SC/BIOL |
| Denomination | (BIOL) |
| Faculty | Faculty of Science (SC) |