



## BOE2M - Introduction

### Introduction

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#### Introduction

UCLouvain and UNamur are mutually committed to setting up a joint master's degree including specialized training in various fields of organism biology and ecology, that reconciles terrestrial with aquatic environments, which were long studied separately.

#### Your profile

You

- have a bachelor's degree in life sciences and would like to specialize in the study of aquatic and terrestrial ecosystems;
- are passionate about experimental research;
- wish to engage in an environment-oriented profession and develop environmental management skills;
- intend to teach science in secondary school and wish to broaden your knowledge do25



- 5.1 initier de manière pro-active des contacts avec des personnes ayant une expertise ou une responsabilité, pour établir une relation professionnelle,
  - 5.2 définir son projet de travail en concertation avec son supérieur,
  - 5.3 s'intégrer dans un environnement professionnel et y interagir de façon efficace et respectueuse avec des interlocuteurs variés.
  - 6. Travailler en équipe dans une perspective collaborative
    - 6.1 participer activement à une réunion d'équipe en partageant ses idées, ses expériences et ses connaissances,
    - 6.2 écouter les autres et arriver à un consensus,
    - 6.3 réaliser, en équipe, des recherches ou d'autres types de projets, en répartissant les tâches et les responsabilités,
    - 6.4 préparer une présentation écrite ou orale en collaboration, en combinant les informations apportées par les membres de l'équipe.
  - 7. Assumer des responsabilités vis-à-vis de l'écosystème Terre et de la société humaine
    - 7.1 évaluer et signaler les enjeux actuels et futurs des actions de l'homme pour le bien-être du monde vivant et son environnement,
    - 7.2 évaluer les enjeux éthiques et sociétaux des pratiques en biologie et gestion des écosystèmes,
    - 7.3 contribuer activement à résoudre des problèmes sociétaux et environnementaux,
    - 7.4 énoncer des critiques constructives et de participer activement aux débats scientifiques et sociétaux.
  - 8. S'il choisit la finalité approfondie,
    - 8.1 appliquer les connaissances acquises au cours du Master dans un environnement nouveau, au sein d'un institut de recherche, une association, une administration, un bureau d'études, une industrie ou une entité de gestion d'espaces naturels.
  - 9. S'il choisit la finalité didactique, mobiliser les compétences nécessaires pour entamer efficacement le métier d'enseignant du secondaire supérieur, en biologie, et pouvoir y évoluer positivement [identique pour toute finalité didactique]
    - 9.1 Intervenir en contexte scolaire, en partenariat avec différents acteurs,
    - 9.2 enseigner en situations authentiques et variées,
    - 9.3 exercer un regard réflexif et se projeter dans une logique de développement continu.
- Pour plus de détails, consultez l'[Agrégation de l'enseignement secondaire supérieur \(sciences biologiques\)](#).

## Programme structure

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The Master in Biology of Organisms and Ecology comprises core subjects of 50 credits, a focus of 30 credits, an option course of 22 credits and 18 credits for optional subjects.

Whatever the focus or the options chosen, the programme of this master shall totalise 120 credits, spread over two years of studies each of 60 credits

### BOE2M Programme

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				Year	
				1	2
<input checked="" type="radio"/> LBOE2111	Evolution	Alice Dennis Laurent Duchatelet	EN [q1] [24h] [2 Credits] 	x	x



				Year	
				1	2
○ LSCI2320	Didactics and epistemology of science	Myriam De Kesel (coord.) Marc de Wergifosse Gabriel Dias de Carvalho Junior	30 [q1] [22.5h] [2 Credits] ⓘ	x	x
○ LBIO2340	Didactics and Epistemology of Biology	Myriam De Kesel	30 [q1+q2] [37.5h+0h] [4 Credits] ⓘ	x	x
○ LAGRE2220	General didactics and education to interdisciplinarity				

**0 Un cours au choix (2 credits)**

Une unité d'enseignement à choisir. L'unité d'enseignement d'Histoire des sciences ne peut être choisie que si l'étudiant ne l'a pas suivie dans le cadre d'études antérieures à l'UNamur

EFAGR2403	Education aux nouvelles technologies de l'enseignement et de l'apprentissage (UNamur)		FR [q2] [15h] [2 Credits]			X
EFAGR2405	Initiation aux pratiques de tutorat (UNamur)		FR [q2] [4h+11h] [2 Credits]			X
ESAGR2213	Didactical Comparison between Experimental Sciences and Mathematics		FR [q2] [15h] [2 Credits]			X
ESSPS1202	History of science (partim)		FR [q2] [15h] [2 Credits]			X
ESAGR2214	Gestion et mise en place d'un laboratoire de chimie dans l'enseignement secondaire		FR [q2] [0h+15h] [2 Credits]			X
EFAGR2407	Interroger les aspects relationnels et émotionnels du métier d'enseignant (UNamur)		FR [q2] [10h+5h] [2 Credits]		X	X



## OPTIONS

- > [Modules](#) [ en-prog-2024-boe2m-lboe900o ]
- > [Liste des activités au choix](#) [ en-prog-2024-boe2m-lboe219o ]
- > [INEO, Interdisciplinary training in entrepreneurship](#) [ en-prog-2024-boe2m-lboe955o ]
- > [Optional courses](#) [ en-prog-2024-boe2m-lsc100o ]

## MODULES [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...)

Year

1 2

### o Content:

#### ⊗ Ecotoxicology

○ ESBOE2162	<a href="#">Ecotoxicology of populations, communities and ecosystems</a>		EN [q1] [12h+12h] [2 Credits] 🌐	X	X
○ ESBOE2170	<a href="#">Advances in applied and basic ecotoxicology (UNamur)</a>		EN [q1] [48h+32h] [6 Credits] 🌐	X	X

#### ⊗ Molecular ecology

○ LBOE2124	<a href="#">Molecular ecology</a>	Renate Wesselingh	EN [q2] [36h+56h] [8 Credits] ⊖ 🌐	X	X
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#### ⊗ Functional genomics

○ LBOE2165	<a href="#">Evolutionary genomics and transcriptomics</a>	Alice Dennis Melissa Page	EN [q2] [30h+18h] [4 Credits] ⊕ 🌐	X	X
○ ESBOE2169	<a href="#">Ecological proteomics and epigenetics</a>		EN [q2] [30h+18h] [4 Credits] ⊕ 🌐	X	X

#### ⊗ Biologie de la conservation et de la restauration

○ LBOE2120	<a href="#">Conservation de la biodiversité</a>	Nicolas Schtickzelle	EN [q1] [36h+12h] [4 Credits] 🌐	X	X
○ LBOE2125	<a href="#">Biodiversity and humans</a>	Charles-Hubert Born Thierry Hance	FR [q1] [24h] [2 Credits] 🌐	X	X
○ LBOE2141	<a href="#">Ecologie de la restauration</a>	Aurélien Kaiser	FR [q1] [12h+12h] [2 Credits] 🌐	X	X

#### ⊗ Landscape and movement ecology

○ LBOE2140	<a href="#">Landscape ecology</a>	Hans Van Dyck	EN [q1] [24h+24h] [4 Credits] 🌐	X	X
○ LBOE2150	<a href="#">Movement ecology</a>	Ruben Evens (compensates Hans Van Dyck Hans Van Dyck)	EN [q1] [24h+12h] [4 Credits] 🌐	X	X

#### ⊗ Ecologie des interactions

○ LBOE2160	<a href="#">Ecologie des interactions</a>	Thierry Hance Hans Van Dyck Renate Wesselingh	FR [q1] [24h] [2 Credits] 🌐	X	X
○ LBOE2161	<a href="#">Ecologie comportementale</a>	Hans Van Dyck	FR [q1] [24h+12h] [3 Credits] 🌐	X	X
○ LBOE2168	<a href="#">Interactions plantes-environnement</a>	Stanley Lutts Muriel Quinet	FR [q1] [24h+12h] [3 Credits] 🌐	X	X



**LISTE DES ACTIVITÉS AU CHOIX**

[Επιλογή](#)

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

Year

1 2

o **Content:**

⊗ **Cours avancés**

⊗ EBIOE2001	<a href="#">Marine Biodiversity: flora expertise (Roscoff)</a>			FR [ ] [ ] [6 Credits] 🌐	X	X
⊗ EBIOE2002	<a href="#">Marine Biodiversity: wildlife expertise (Roscoff)</a>			FR [ ] [ ] [6 Credits] 🌐	X	X
⊗ ES BIO2132	<a href="#">Bacterial Genetics (UNamur)</a>			EN [q1] [22h] [3 Credits] 🌐	X	X
⊗ ES BIO2201	<a href="#">Parasitology</a>			EN [q1] [15h] [2 Credits] 🌐	X	X
⊗ ES BIO2205	<a href="#">Epidemiology</a>			<a href="#">Επιλογή</a>		

[Επιλογή](#)



## INEO, INTERDISCIPLINARY TRAINING IN ENTREPRENEURSHIP

- 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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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>*

## Supplementary classes

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***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.***

In some cases, a complementary program (maximum 60 ECTS) consisting of courses from the bachelor in biology will be required, in coordination with the Academic Advisor, and based on the student's previous background and training.

## 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 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.





[Access based on application](#)

## Non university Bachelors

> 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



## 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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Inter-university cooperation between UCL and FUNDP, where complementary research in ecology is carried out, means that the range of available courses is much wider than at each individual university. We have built a programme with joint training and 7 credits of option courses. These option courses are mainly focused on subjects which cut across the boundaries between the plant and animal and the terrestrial and aquatic worlds. The structure of the programme enables students to diversify and individualize their studies with 11 credits for optional activities. The dissertation begins in the second semester of the first year and is defended at the end of the first semester of the second year: this is convenient for doing field research during the spring and summer. The placement (25 credits) in the

Denomination	(BIOL)
Faculty	Faculty of Science (SC)
Sector	Sciences and Technology (SST)
Acronym	BIOL
Postal address	Croix du sud 4-5 - bte L7.07.05 1348 Louvain-la-Neuve Tel: +32 (0) 10 47 34 89 - Fax: +32 (0) 10 47 35 15 <a href="https://uclouvain.be/fr/facultes/sc/biol">https://uclouvain.be/fr/facultes/sc/biol</a>
Website	
Academic supervisor:	<a href="mailto:a.determiner@uclouvain.be">a.determiner@uclouvain.be</a>
Jury	
	<ul style="list-style-type: none"><li>• President and study advisor: <a href="#">Renate Wesselingh</a></li><li>• Secretary: <a href="mailto:frederik.delaender@unamur.be">frederik.delaender@unamur.be</a></li></ul>
Useful Contact(s)	
	<ul style="list-style-type: none"><li>• Administrative manager for the student's annual program: <a href="#">Maryse Hermant</a></li></ul>

