

**At Louvain-la-Neuve - 120 credits - 2 years - Day schedule - In French**

Dissertation/Graduation Project : **YES** - Internship : **YES**

Activities in English: **YES** - Activities in other languages : **NO**

Activities on other sites : **YES**

Main study domain : **Sciences**

Organized by: **Faculty of Science (SC)**

Programme acronym: **BOE2M** - Francophone Certification Framework: 7

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## 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 with additional courses in biology of organisms and ecology.

## BOE2M - Teaching profile

### Learning outcomes

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The UCLouvain (Université catholique de Louvain at Louvain-la-Neuve) and UNamur (Université de Namur at Namur) organize a joint programme, at both sites, for the Master (120 credits) in Biology of Organisms and Ecology, described below.

The aim is to train scientists who can analyse, understand and react when faced with questions or problems relating to the environment and biodiversity, both in terrestrial and aquatic ecosystems, and to the functioning of organisms function in these ecosystems. This involves advanced training, field observation, experimental research both inside and outside the laboratory, and requires the modern methods used by biologists.

The **research focus** prepares students to become researchers or to have an environmentally oriented profession outside of academia. The key element of this focus is a 4-month internship, which can take place in any professional environment that works around the themes covered by the program.

- 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

## Detailed programme by subject

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### CORE COURSES [55.0]

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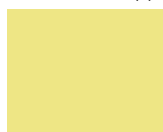
- Mandatory
  - ✂ Optional
  - △ Not offered in 2024-2025
  - ⊙ Not offered in 2024-2025 but offered the following year
  - ⊕ Offered in 2024-2025 but not the following year
  - △ ⊕ Not offered in 2024-2025 or the following year
  - Activity with requisites
-

				Year	
				1	2
○ LBOE2111	Evolution	Alice Dennis Laurent Duchatelet	EN [q1] [24h] [2 Credits]	x	x
○ LBOE2112	Data analysis and modeling of biological systems	Frederik De Laender Nicolas Schtickzelle	EN [q1] [24h+36h] [5 Credits]	x	x
○ LBOE2113	Scientific and professional communication in English	Sandrine Meirlaen Melissa Page Anne-Julie Toubeau	FR [q2] [15h] [3 Credits]	x	
○ LBOE2191	Ecologie et société	Thierry Hance	FR [q1] [24h] [3 Credits]	x	x
○ LGEO1342A	Systèmes d'information géographique (SIG) : partim	Sophie Vanwambeke	FR [q1] [24h+24h] [4 Credits]	x	x

○ **Sciences humaines**

au moins 2 crédits obligatoires (et jusqu'à 4 crédits supplémentaires considérés comme cours au choix)

Minimum 2 credit(s)



## LIST OF FOCUSES

- > [Research Focus](#) [ en-prog-2024-boe2m-lboe200a ]
- > [Teaching Focus](#) [ en-prog-2024-boe2m-lboe200d ]

## RESEARCH FOCUS [30.0]

- 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:

● LBOE2240	Stage professionnel		[FR] [q2] [] [28 Credits] 🌐		x
● LBOE2241	Projet professionnel		[FR] [q2] [] [2 Credits] 🌐		x

## TEACHING FOCUS [30.0]

**IMPORTANT NOTE:** In accordance with article 138 para. 4 of the decree of 7 November 2013 concerning higher education and the academic organisation of studies, teaching practice placements will not be assessed in the September session. Students are required to make every effort to successfully complete the teaching practice in the June session, subject to having to retake the year.

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Year

1 2

### o Content:

#### ⊗ Finalité didactique UCLouvain (30 credits)

offerte sur le site de Louvain-la-Neuve (UCLouvain)

#### 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
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				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	Stéphane Colognesi Severine De Croix Myriam De Kesel Jean-Louis Dufays Anne Ghysselinckx Véronique Lemaire Benoît Vercruyse	30 [q1+q2] [37.5h] [3 Credits] ⓘ	x	x

x

				Year	
				1	2
ESAGR2202	Didactique et épistémologie de la physique I (UNamur)		PR [q1] [30h] [3 Credits]		x
ESAGR2204	Didactique et épistémologie de la chimie I (UNamur)		PR [q1] [30h] [3 Credits]		x

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



## OPTIONS

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- > 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]

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- Mandatory
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  - Activity with requisites
  - 🌐 Open to incoming exchange students
  - 🌐 Not open to incoming exchange students
  - [FR] Teaching language (FR, EN, ES, NL, DE, ...T 8llowing year
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⌘ **Ecologie et gestion des milieux aquatiques**







## **INEO, INTERDISCIPLINARY TRAINING IN ENTREPRENEURSHIP**

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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] Teaching language (FR, EN, ES, NL, DE, ...)
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## 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







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[Access based on application](#)

## 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 credit 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 second semester of the second year introduces students to a professional environment. All students must return for the last five credits in advanced training; there is also a debriefing and an opportunity to exchange experiences with the other students.

## Evaluation

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***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 work placement). Where necessary, students will also be assessed on how much they have learned from lectures. As far as possible, there will be continuous assessment, including regular 'open book examinations'. Certain activities will not be given a precise mark but will be officially certified. Assessment of the dissertation is in two stages : a 'progress report' at the end of the first year of the Master and the final presentation.

## Mobility and/or Internationalisation outlook

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Students doing the research focus can go abroad, under the Socrates or Mercator exchange schemes, during the second semester of the second year of the Master to do their placement and/or do a part of their dissertation during the dissertation period and possibly also take some optional activities.

Mobility in the first semester of the first year of the Master may also be possible, providing equivalents for the core subjects and some of the option courses can be found. In the same way, students from foreign universities can come to UCL to take selected activities from our Master programme and/or do a part of their final dissertation.

## Possible trainings at the end of the programme

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Whatever focus is chosen, the Master in Biology of Organisms and Ecology gives direct access to the doctorate in science.

## Contacts

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### Curriculum Management

Entity

Structure entity

SST/SC/BIOL

Denomination  
Faculty  
Sector  
Acronym  
Postal address

(BIOL)  
Faculty of Science (SC)  
Sciences and Technology (SST)  
BIOL  
Croix du sud 4-5 - bte L7.07.05  
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Website

