UCLouvain

BOE2M

2024 - 2025

Master [120] in Biology of Organisms and Ecology

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 - Teaching profile

Learning outcomes

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

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.

Wathever 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

CORE COURSES [55.0]

- O 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)

LFILO2003E	Ethics in the Sciences and technics (sem)	Alexandre Guay (compensates Charles Pence) Hervé Jeanmart René Rezsohazy	FR [q2] [15h+15h] [2 Credits]	x	
LSC2001	Introduction to contemporary philosophy	Peter Verdée Peter Verdée (compensates Charles Pence)	FR [q2] [30h] [2 Credits]	x	
LSC2220	Philosophy of science	Alexandre Guay	EN [q2] [30h] [2 Credits]	x	
ESSPS2101	Science, ethics and development				

LIST OF FOCUSES

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

RESEARCH FOCUS [30.0]

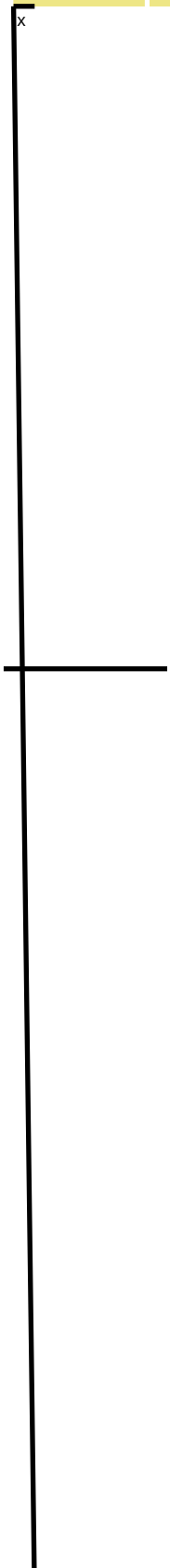
- Mandatory
- Optional
- Not offered in 2024-2025
- Not offered in 2024-2025 but offered the following year
- Offered in 2024-2025 but not the following year
- Not offered in 2024-2025 or the following year
- Activity with requisites
- Open to incoming exchange students
- Not open to incoming exchange students
- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

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

Content:

		Year 1	Year 2
LBOE2240	Stage professionnel		

				Year 1	2
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 Ghysselinckx Véronique Lemaire Benoît Vercruysse	FR [q1+q2] [37.5h] [3 Credits]	x	x



Year
1 2

ESAGR2202	Didactique et épistémologie de la physique I (UNamur)	

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]

O 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...)

O Content:

				Year 1	Year 2
⊠ Ecotoxicology					
O ESBOE2162	Ecotoxicology of populations, communities and ecosystems		EN [q1] [12h+12h] [2 Credits]	x	x
O ESBOE2170	Advances in applied and basic ecotoxicology (UNamur)		EN [q1] [48h+32h] [6 Credits]	x	x
⊠ Molecular ecology					
O LBOE2124	Molecular ecology	Renate Wesselingh	EN [q2] [36h+56h] [8 Credits] ⊘	x	x
⊠ Functional genomics					
O LBOE2165	Evolutionary genomics and transcriptomics	Alice Dennis Melissa Page	EN [q2] [30h+18h] [4 Credits] ⊕	x	x
O ESBOE2169	Ecological proteomics and epigenetics		EN [q2] [30h+18h] [4 Credits] ⊕	x	x
⊠ Biologie de la conservation et de la restauration					
O LBOE2120	Conservation de la biodiversité	Nicolas Schtickzelle	FR [q1] [36h+12h] [4 Credits]	x	x
O LBOE2125	Biodiversity and humans	Charles-Hubert Born Thierry Hance	FR [q1] [24h] [2 Credits]	x	x
O LBOE2141	Ecologie de la restauration	Aurélien Kaiser	FR [q1] [12h+12h] [2 Credits]	x	x
⊠ Landscape and movement ecology					
O LBOE2140	Landscape ecology	Hans Van Dyck	EN [q1] [24h+24h] [4 Credits]	x	x
O LBOE2150	Movement ecology	Ruben Evens (compensates Hans Van Dyck) Hans Van Dyck	EN [q1] [24h+12h] [4 Credits]	x	x
⊠ Ecologie des interactions					
O LBOE2160	Ecologie des interactions	Thierry Hance Hans Van Dyck Renate Wesselingh	FR [q1] [24h] [2 Credits]	x	x
O LBOE2161	Ecologie comportementale	Hans Van Dyck	EN [q1] [24h+12h] [3 Credits]	x	x
O LBOE2168	Interactions plantes-environnement	Stanley Lutts Muriel Quinet	EN [q1] [24h+12h] [3 Credits]	x	x

				Year 1	2

Ecologie et gestion des milieux aquatiques

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

Ecologie et évolution appliquées

LBOE2166	Lutte biologique	Claude Bragard Thierry Hance	FR [q2] [12h+24h] [3 Credits]	x	x
LBOE2185	Evolutionary applications	Hans Van Dyck	EN [q2] [20h] [2 Credits]	x	x
ESBOE2237	Biological water quality assessment (UNamur)		FR [q2] [24h+12h] [3 Credits]	x	x

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, ...)

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 25credit(s)

Content:

				Year 1	Year 2
Optional LINEO2021	Financer son projet *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).*	Philippe Grégoire Olivier Vercruysse	[FR] [q2] [30h+15h] [5 Credits]	x	
Mandatory LINEO2001	Théorie de l'entrepreneuriat				

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.

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

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

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.

BOE2M - 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

Access based on application

Specific professional rules

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

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 credist 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 withan Tmedist tor ant

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
Website	