

**At Louvain-la-Neuve - 120 credits - 2 years - Day schedule - In French**Dissertation/Graduation Project : **YES** - Internship : **YES**Activities in English: **optional** - Activities in other languages : **NO**Activities on other sites : **NO**Main study domain : **Sciences**Organized by: **Faculty of bioscience engineering (AGRO)**Programme acronym: **ENVI2M** - Francophone Certification Framework: 7**Table of contents**

Introduction .....	2
Teaching profile .....	3
Learning outcomes .....	3
Programme structure .....	4
Programme .....	4
Detailed programme by subject .....	4
Supplementary classes .....	16
Course prerequisites .....	17
The programme's courses and learning outcomes .....	17
Information .....	18
Access Requirements .....	18
Teaching method .....	20
Evaluation .....	20
Mobility and/or Internationalisation outlook .....	20
Possible trainings at the end of the programme .....	20
Contacts .....	20

## ENVI2M - Introduction

### Introduction

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## ENVI2M - Teaching profile

### Learning outcomes

The Masters in Environmental Sciences and Management is offered as a priority to students who have completed a Masters level course of study at one of the faculties in the science and technology sector, human sciences sector or health sciences sector, or at a college of further education. The admission requirements are those of an advanced Masters.

Teaching on environmental sciences and management offers both graduate students and professionals the opportunity to learn about the basic principles of environmental sciences and the management of environmental problems that are complex by nature and involve several disciplines.

The student programme is partially tailored to suit their initial training. Part of the programme is aimed at allowing them to acquire basic knowledge in the various disciplines involved in environmental issues, in science and technology (chemistry, biology, ecology, IT, mathematics, statistics, geography...) and in human sciences (sociology, law, economics, philosophy...). Part of the programme is intended to address environmental issues through various disciplines (economics, law, politics, toxicology, science and technology). Finally, part of the programme is designed to develop the ability to approach environmental issues across disciplines, integrating their respective contributions (multidisciplinary approach) and to identify and negotiate consensual solutions with the different stakeholders.

Upon completion of the programme, the Master of Environmental Sciences and Management will be able to take a mediating role, alone or within a team, to resolve environmental issues: to gain an understanding of the problem and to analyse it as a whole, to summarise the positions of the various stakeholders, including experts, to communicate these comprehensibly to all parties, to develop and propose consensual solutions, to argue and negotiate with stakeholders.

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

1. To analyse the scientific, technical and non-technical dimensions of an environmental problem.
  - 1.1 To identify the stakeholders concerned by the environmental issue: the general public, scientific experts, non-governmental organisations, public authorities, companies, etc.
  - 1.2 To gather information, in French and English, on the various dimensions of the environmental issue: scientific, technical/ technological, human, etc.
  - 1.3 To use basic theoretical concepts in science and technology in an appropriate manner: chemistry, biology, ecology, toxicology, IT, mathematics, statistics, geography, etc. related to the environmental issue.
  - 1.4 To use basic theoretical concepts in the human sciences in an appropriate manner: sociology, philosophy, law, economics, etc. related to the environmental issue.
  - 1.5 To communicate with different stakeholders and with independent experts, to identify the elements underlying their respective viewpoints and to incorporate these into the analysis.
  - 1.6 To establish links between the basic concepts in science and technology and the humanities to explain the environmental issue as a whole.
  - 1.7 To work with colleagues to interpret all the aspects and facets of the environmental issue.
2. To construct and develop one or more solutions to tackle the environmental issue, factoring in the technological and non-technological aspects.
  - 2.1 To summarise different types of documents related to an environmental issue (scientific and technical / technological and humanities)
  - 2.2 To summarise the views of stakeholders involved in the environmental issue.
  - 2.3 To develop innovative proposals for solutions to the environmental issue with the support of stakeholders, by combining the data and scientific, technical / technological and non-technical methods available.
  - 2.4 To select proposals for solutions in a substantiated way (self-evaluation) that best fulfil the different dimensions of the environmental issue (scientific, technical / technological and non-technical).
  - 2.5 To identify with different stakeholders and, in relation to each of them, to decipher their views and positions with regard to the environmental issue and anticipate their reactions to new data and proposals.
  - 2.6 To evaluate solutions against all criteria (feasibility, consistency, stakeholders, etc.) and dimensions (scientific, technical / technological and humanities).
3. To communicate the proposed environmental solutions to the stakeholders.
  - 3.1 To present the analysis of the environmental problem and the proposed solutions verbally and in writing, in a substantiated manner using modern communication techniques.
  - 3.2 To adapt their language and vocabulary specifically taking the cultural differences of the conversational partners into consideration: colleagues, general public, scientific experts, non-governmental organisations, public authorities, businesses, etc.
4. To negotiate a consensual solution between environmental stakeholders, based on the various solutions proposed.
  - 4.1 To interpret the views of stakeholders on the environmental issue.
  - 4.2 To arbitrate the views of stakeholders on the environmental solutions.
  - 4.3 To convince stakeholders of a common solution to the environmental issue through argumentation.
  - 4.4 To make choices, alone or within a team, taking account of all the dimensions and all the stakeholders, with a view to reaching a consensual solution.

## Programme structure

The interfaculty nature of the Master means that a significant part of the programme includes courses organized by different partner faculties.

The programme is structured as follows :

1. students from different backgrounds will follow introductory courses which will enable them to acquire a foundation in disciplines they have not studied before. Students must take all these activities to qualify for the Master degree : exemptions may be given for subjects already studied and previous results. If more than 21 credits are lacking, students will have to complete a preparatory year before they can enter the Master programme.
2. a block of compulsory group activities : 7 credits
3. a professional focus including 30 credits for compulsory activities
4. an option or a block of optional subjects : the option programme must include a minimum of 15 credits and a maximum of 30. It is possible to select a mixed programme of activities. However, it is compulsory to take at least 15 credits for activities within a single option if this option is to be mentioned in the supplement to the degree certificate. Failing this, there will be no specific reference to a particular option : the supplement will merely list the optional subjects taken.
5. a professional work placement, ideally done outside the university: 30 credits
6. a final piece of individual work (report on the professional work placement) : 15 credits
7. optional activities enabling students to supplement their programme, depending on any exemptions they may have been granted.

**To recap :**

1. Core subjects (total : min. 52 credits and max. 75 credits)
  - work placement (\*) : 30 credits
  - individual final projet (\*) : 15 credits
  - compulsory group activities (\*) : 7 credits
  - basic activities : 21 credits maximum
  - optional activities : 15 credits
2. Professional focus (\*) : 30 credits
3. Option courses or optional subjects :
  - Option course: 15 credits minimum (\*) and 30 credits maximum.
  - Optional subjects : 15 credits minimum (\*).

(\*) Compulsory activities

Each individual programme must always be approved by the programme coordinator.

## ENVI2M Programme

## Detailed programme by subject

### CORE COURSES

Une mise à niveau dans les différentes disciplines de base (Tronc commun) Le master ENVI est conçu pour des étudiants venant de différents horizons (sciences et technologies, sciences humaines, sciences médicales) qui n'ont pas nécessairement acquis toutes les notions de base importantes en sciences de l'environnement et du développement durable. Pour leur garantir une formation de base adéquate, le tronc commun comprend un ensemble de cours de mise à niveau dans les disciplines de base (cours de niveau bachelier). Une formation de base dans chacune de ces disciplines doit avoir été obligatoirement suivie pour obtenir le diplôme de master. Des dispenses sont accordées en fonction des cours déjà suivis par l'étudiant dans le cadre de son diplôme universitaire précédent et des résultats obtenus.

- Mandatory
- ⊗ Optional
- △ Not offered in 2023-2024
- ⊙ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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 Activités communes obligatoires**

Pour 53 crédits minimum :

o LENVI2199	Work placement	Dimitri Lederer Dimitri Lederer (compensates Caroline Nieberding)	EN [q1 or q2] [15h] [30 Credits]		X
o LENVI2099	Projet personnel de fin d'études		EN [q1+q2] [] [15 Credits]		X
o LESPO2103	Environment and Global Economy	Bert Willems	EN [q2] [30h] [5 Credits]	X	

**o Une activité au choix parmi les intitulés suivants :**

o LB RTE2201	Human and environmental toxicology	Cathy Debier	EN [q1] [30h+7.5h] [5 Credits] > French-friendly	X	
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**o Mandatory subjects**

Rem 1: L'étudiant(e) doit choisir un cours dans chacune des disciplines suivantes, s'il(elle) n'a pas réussi dans sa formation universitaire antérieure un cours qui aura été jugé équivalent, sachant que le total des crédits de son programme devra atteindre 120 crédits pour l'ensemble du master. Ce choix devra être soumis à l'approbation du coordinateur du programme. Rem 2: L'étudiant(e) veillera à s'assurer qu'il/elle dispose des bases nécessaires pour suivre les activités choisies.

**o Biology: one course to be chosen**

Certaines des activités proposées pourront être suivies en partie.

o LBIO1114	Introduction to biology	Patrick Dumont Caroline Nieberding	EN [q2] [30h+7.5h] [3 Credits]	X	X
o LPSP1005	General biology, including elements of human genetics	François Chaumont (coord.) Patrick Dumont Charles Hachez	EN [q1] [30h] [4 Credits]	X	X

**o Chemistry: one course to be chosen**

Certaines des activités proposées pourront être suivies en partie.

o LBIR1140	Chimie générale 1	Pierre Delmelle (coord.) Charles-André Fustin Michel Ghislain (coord.)	EN [q1] [30h+30h] [6 Credits]	X	X
o LIEPR1001	General chemistry and biomolecules	Patrick Henriet	EN [q1] [30h+15h] [5 Credits]	X	X
o LINGE1115	Chemistry (Part 1)	Yaroslav Filinchuk	EN [q1] [50h+10h] [5 Credits]	X	X
o LINGE1223	Chemistry	Jean-François Gohy	EN [q2] [20h+10h] [3 Credits]	X	X
o LMAPR2231	Metallurgical and electrochemical processes	Joris Proost	EN [q2] [30h+22.5h] [5 Credits] > French-friendly	X	X

**o Ecology: one course to be chosen**

Le cours LBIO1351 est recommandé.

o LBIO1217	Ecology II	Thierry Hance	EN [q2] [30h+10h] [3 Credits]	X	X
o LBIR1354	Biologie des interactions	Anne-Laure Jacquemart (coord.) Anne Legrève	EN [q2] [22.5h+15h] [3 Credits]	X	X

**o Economie: une activité au choix parmi les intitulés suivants:**

o LBIR1260	Principles of economics	Goedele Van den Broeck	EN [q1] [30h+15h] [3 Credits] > French-friendly	X	X
o LECGE1115	Political Economics	Rigas Oikonomou Gonzague Vannoorenberghe	EN [q1] [45h+15h] [5 Credits]	X	X
o LPSP1009	Economy: education, health and work	Barbara Cresti Barbara Cresti (compensates François Maniquet)	EN [q2] [30h] [3 Credits]	X	X

**o Philosophy: one course to be chosen**

LSC1120 is recommended.

o LCOPS1124	Philosophy	Sylvain Camilleri Nathalie Frogneux Yoann Malinge	EN [q2] [30h] [5 Credits]	X	X
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				Year	
				1	2
☒ LFILO1310	Philosophy of Nature	Alexandre Guay	EN [q1] [30h] [3 Credits] 🌐	X	X
☒ LSC2220	Philosophy of science	Alexandre Guay	EN [q2] [30h] [2 Credits] 🌐	X	X
☒ LSC1120	Philosophy, ethology and ethics	Charles Pence	EN [q1] [60h] [2 Credits] 🌐	X	X

☒ **Sociology: one course to be chosen**

Le cours LPSP1007 est recommandé.

☒ LPOLS1121	Sociologie du comportement politique	Benoît Rihoux	EN [q2] [22.5h] [4 Credits] 🌐	X	X
☒ LPSP1007	Sociology: education, health and work	Marc Zune	EN [q1] [30h] [3 Credits] 🌐	X	X
☒ LDROI1221	Introduction to Sociology	Laura Merla Benoît Rihoux	EN [q1] [45h] [3 Credits] 🌐	X	X

☒ **Geography: one course to be chosen**

L'étudiant peut éventuellement choisir d'autres activités de Géographie en fonction des prérequis dont il dispose.

☒ LGEO1221	Elements of human geography	Marie-Laurence De Keersmaecker	EN [q1] [30h+30h] [5 Credits] 🌐	X	X
☒ LGEO2110	Mondialisation, développement et environnement	Eric Lambin	EN [q1] [30h+30h] [5 Credits] 🌐	X	X

☒ **Applied Informatics: one course to be chosen**

☒ LECGE1215	Information Technology in Economics and Management	Manuel Kolp Marco Saerens	EN [q2] [30h+20h] [4 Credits] 🌐	X	X
☒ LBIR1271	Projet intégré en informatique et mathématiques appliquées	Patrick Bogaert Emmanuel Hanert (coord.) Marnik Vanclooster	EN [q2] [30h+30h] [5 Credits] 🌐	X	X

☒ **Statistics and Data Analysis: one course to be chosen**

☒ LBIO1283	Statistical principles and biological data analysis	Nicolas Schtickzelle	EN [q2] [30h+40h] [4 Credits] 🌐	X	X
☒ LBIR1212	Probabilities and statistics (I)	Patrick Bogaert	EN [q1] [30h+15h] [4 Credits] 🌐	X	X
☒ LMAT1271	Calculation of probability and statistical analysis	Rainer von Sachs	EN [q2] [30h+30h] [6 Credits] 🌐 > English-friendly	X	X
☒ LECGE1114	Statistics in Economics and Management I	Alexandre Jacquemain	EN [q2] [30h+30h] [5 Credits] 🌐	X	X
☒ LEPL1109	Statistics and data sciences	Donatien Hainaut Laurent Jacques	EN [q1] [30h+30h] [5 Credits] 🌐	X	X

☒ **English: one course to be chosen**

Le cours LANGL1882 est fortement recommandé (thèmes liés à l'environnement). Les cours suivants le sont par ordre d'intérêt décroissant. Des tests dispensatoires sont organisés au début du 1er quadrimestre.

☒ LANGL1882	English : reading and listening comprehension of texts in Bioengineering	Charline Coduti (compensates) Sandrine Meirlaen Amandine Dumont Ariane Halleux Anne-Julie Toubeau (coord.) Marine Volpe (compensates) Sandrine Meirlaen)	EN [q2] [30h] [2 Credits] 🌐	X	X
☒ LANG1861	English: reading and listening comprehension of scientific texts	Catherine Avery (coord.) Fanny Desterbecq Amandine Dumont (coord.) Marc Piwnik	EN [q2] [10h] [2 Credits] 🌐	X	X
☒ LANG1862	English: reading and listening comprehension of scientific texts	Ahmed Adriouèche (coord.) Catherine Avery Amandine Dumont Ariane Halleux (coord.)	EN [q1] [30h] [2 Credits] 🌐	X	X

☒ **Activités facultatives:**

Le volume de ces activités est modulable avec les activités obligatoires pour obtenir 120 crédits minimum pour l'ensemble du master. D'autres activités relevant des sciences de l'environnement peuvent également être choisies.

☒ **Communication scientifique**

Year

				1	2
☒ LCOMU2600	Scientific popularisation	Joël Saucin (compensates Jerry Jacques)	PR [q1] [30h] [5 Credits] 🌐	x	x

☒ **Anthropologie**

☒ LDVLP2320	Anthropology of development and environment	Emmanuelle Piccoli	PR [q1] [30h] [5 Credits] Δ 🌐	x	x
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☒ **Philosophie des sciences de la nature: une activité au choix parmi les intitulés suivants:**

☒ LFILO2003E	Ethics in the Sciences and technics (sem)	Alexandre Guay (compensates Charles Pence) Hervé Jeanmart René Rezsóhazy	PR [q2] [15h+15h] [2 Credits] 🌐	x	x
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**PROFESSIONAL FOCUS [30.0]**

Un coeur de formation interdisciplinaire, spécifique et original (Finalité spécialisée) Un ensemble de cours, dédiés aux sciences environnementales et aux approches interdisciplinaires de gestion des problématiques environnementales et du développement durable. Ces cours sont rassemblés dans le tronc commun obligatoire et dans la finalité spécialisée. Un stage réalisé en milieu professionnel, à l'extérieur de l'université, amenant les étudiants à mettre en pratique leur formation théorique dans des situations concrètes, en s'intégrant et en apportant leur contribution à l'équipe des professionnels de l'institution d'accueil (entreprise, bureau d'étude, ONG, administration publique,...) pour résoudre les problématiques environnementales auxquelles ils sont confrontés. Un projet personnel de fin d'études, correspondant à la rédaction d'un rapport sur le stage professionnel.

- Mandatory
- ⌘ Optional
- △ Not offered in 2023-2024
- ◌ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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:****o Problématique générale de l'environnement**

○ LENVI2010	Public strategies for sustainable development	Thomas Pardoën Benoît Rihoux Valérie Swaen (coord.)	FR [q1] [15h] [2 Credits] 🌐	X	
○ LENVI2002	Seminars in environmental science and management	Philippe Baret Hubert Bedoret (compensates Philippe Baret) Anne-Laure Jacquemart (coord.) Jean-Pierre Raskin Valérie Swaen	FR [q1] [15h] [2 Credits] 🌐	X	
○ LENVI2101	Societies, populations, environment, development: issues and interdisciplinary approaches	Nathalie Frogneux (coord.) Julie Hermesse Julie Hermesse (compensates Caroline Nieberding) Jean-Pierre Raskin Jean-Pierre Raskin (compensates Caroline Nieberding)	FR [q1] [45h] [6 Credits] 🌐	X	

**o Pollution et environnement**

○ LENVI2012	Environment Pollution	Yannick Agnan Patrick Gerin (coord.)	FR [q2] [45h+30h] [7 Credits] 🌐 > English-friendly	X	
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**o Droit et environnement**

○ LDROP2061	Sustainable Development Law	Charles-Hubert Born	FR [q2] [30h] [3 Credits] 🌐	X	
○ LDROP2063	Sectoral Environmental Law	Valérie Dupont Damien Jans	FR [q2] [30h] [3 Credits] 🌐	X	

**o Gestion de l'environnement**

○ LENVI2011	Environmental assessment and management methods	Jean-Pierre Tack	FR [q2] [30h] [3 Credits] 🌐	X	
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**o Formation à la communication**

○ LENVI2004	Workshop in environmental communication and conflict management through negotiation	Nathalie Frogneux	FR [q1] [20h] [4 Credits] 🌐	X	
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## OPTIONS

Une option et/ou un ensemble de cours au choix (Options)

L'étudiant dispose d'une grande liberté pour compléter le coeur de sa formation (voir TC et FS) par le choix des cours qui l'intéressent dans un ensemble de cours facultatifs du tronc commun et de cours proposés au sein de différentes options. Il est possible de panacher un programme de cours parmi ces options. Il est cependant nécessaire de prendre au moins 15 crédits d'activités dans une seule et même option pour que celle-ci figure dans le supplément au diplôme. Dans le cas contraire, aucune référence à une option ne sera mentionnée dans le supplément au diplôme, qui indiquera simplement la liste des cours au choix qui ont été suivis.

- > [Option 1 : Industry and Environment](#) [ en-prog-2023-envi2m-lenvi201o ]
- > [Option 2 : Agriculture and Environment](#) [ en-prog-2023-envi2m-lenvi202o ]
- > [Option 3: Land Development and Environment](#) [ en-prog-2023-envi2m-lenvi203o ]
- > [Option 4: Public Administration and Environment](#) [ en-prog-2023-envi2m-lenvi204o ]
- > [Optional Courses](#) [ en-prog-2023-envi2m-lenvi206o ]

## OPTION 1 : INDUSTRY AND ENVIRONMENT

- Mandatory
- ⊗ Optional
- △ Not offered in 2023-2024
- ⊖ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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...)

From 15 to 30credit(s)

Year

1 2

### Content:

#### ⊗ Activités en gestion de l'environnement

⊗ LBIR1351	<a href="#">Introduction to systems analysis</a>	Philippe Baret Océane Duluins (compensates Philippe Baret)	FR [q1] [10h+20h] [3 Credits] 🌐	X	X
⊗ LBRAI2210	<a href="#">Microeconomics of Development</a>	Frédéric Gaspard	EN [q1] [30h] [3 Credits] 🌐 > French-friendly	X	X
⊗ LENVI2006	<a href="#">Environmental sociology</a>	Brendan Coolsaet	FR [q2] [15h+15h] [3 Credits] 🌐	X	X
⊗ LINMA2510	<a href="#">Mathematical ecology</a>	Eric Deleersnijder Emmanuel Hanert Thierry Van Effelterre	FR [q2] [30h+22.5h] [5 Credits] ⊕ 🌐 > French-friendly	X	X

#### ⊗ Activités en traitement et recyclage

⊗ LGCIV2073	<a href="#">Hydrogeology and Geoenvironment</a>	Pierre-Yves Bolly	EN [q1] [30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LMAPR2647	<a href="#">Sustainable treatment of industrial and domestic waste: Fundamentals</a>	Olivier Françoisse Patricia Luis Alconero Olivier Noiset Benoît Stenuit	FR [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X

#### ⊗ Activité en énergie et environnement

⊗ LENVI2007	<a href="#">Renewable energy sources</a>	Emmanuel De Jaeger Patrick Gerin (coord.) Hervé Jeanmart	FR [q1] [45h+15h] [4 Credits] 🌐 > French-friendly	X	X
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#### ⊗ Activité en risques technologiques

○ LMECA2645	<a href="#">Major technological hazards in industrial activity.</a>	Aude Simar	FR [q2] [30h] [3 Credits] 🌐	X	X
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### ⌘ Activité en climat: état, pression et réponses

Le cours PHY2153 peut également être suivi en partie pour 3 crédits.

⌘ LPHYS2162	Introduction to the physics of the climate system and its modelling	Hugues Goosse Francesco Ragone	EN [q1] [22.5h+22.5h] [5 Credits]  > French-friendly	X	X
⌘ LENVI2005	Climate change: impacts and solutions	Michel Crucifix Pierre Delmelle (coord.) Kristof Van Oost	EN [q2] [30h] [3 Credits] 	X	X
⌘ LBIR1328A	Climatology and hydrology applied to agronomy and the environment - partim A : Climatology	Alice Alonso (compensates Mamik Vanclooster) Charles Bielders Hugues Goosse	EN [q1] [22.5h] [2 Credits]  > French-friendly	X	X

**OPTION 2 : AGRICULTURE AND ENVIRONMENT**

- Mandatory
- ⊗ Optional
- △ Not offered in 2023-2024
- ⊖ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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...)

From 15 to 30credit(s)

Year  
1 2

**o Content:****⊗ Activités en pollution**

⊗ LBIRE2105	Assessment of water - soil - air quality	Yannick Agnan (coord.) Philippe Maetz Xavier Rollin	FR [q1] [30h+0h] [3 Credits] 🌐	X	X
⊗ LMAPR2647	Sustainable treatment of industrial and domestic waste: Fundamentals	Olivier Françoisse Patricia Luis Alconero Olivier Noiset Benoît Stenuit	FR [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X

**⊗ Activités en agriculture et écologie**

⊗ LBOE2166	Lutte biologique	Claude Bragard Thierry Hance	FR [q2] [12h+24h] [3 Credits] 🌐	X	X
⊗ LBOE2292	Modélisation écologique et évolutive	Renate Wesselingh	FR [q1 or q2] [12h+36h] [4 Credits] 🌐	X	X
○ LBIRA2109	Agrarian systems and farm	Pierre Bertin	FR [q1] [30h+0h] [3 Credits] 🌐 > English-friendly	X	

**⊗ Activités en gestion: compléments**

⊗ LBIR1351	Introduction to systems analysis	Philippe Baret Océane Duluins (compensates Philippe Baret)	FR [q1] [10h+20h] [3 Credits] 🌐	X	X
⊗ LBRAI2210	Microeconomics of Development	Frédéric Gaspart	EN [q1] [30h] [3 Credits] 🌐 > French-friendly	X	X
⊗ LENVI2006	Environmental sociology	Brendan Coolsaet	FR [q2] [15h+15h] [3 Credits] 🌐	X	X

**⊗ Activité en climat: état, pression et réponses**

Le cours PHY2153 peut également être suivi en partie pour 3 crédits.

⊗ LPHYS2162	Introduction to the physics of the climate system and its modelling	Hugues Goosse Francesco Ragone	EN [q1] [22.5h+22.5h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LENVI2005	Climate change: impacts and solutions	Michel Crucifix Pierre Delmelle (coord.) Kristof Van Oost	FR [q2] [30h] [3 Credits] 🌐	X	X
⊗ LBIR1328A	Climatology and hydrology applied to agronomy and the environment - partim A : Climatology	Alice Alonso (compensates Marnik Vanclooster) Charles Bielders Hugues Goosse	EN [q1] [22.5h] [2 Credits] 🌐 > French-friendly	X	X

**⊗ Activité en développement territorial**

⊗ LBRAT2103	Sociology of the actors and the rural territories	Yves Hanin	FR [q1] [30h] [3 Credits] 🌐	X	X
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**OPTION 3: LAND DEVELOPMENT AND ENVIRONNEMENT**

- Mandatory
- ⊗ Optional
- △ Not offered in 2023-2024
- ⊖ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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...)

From 15 to 30credit(s)

Year

1 2

### Content:

#### ⊗ Activités en sociologie du développement territorial

⊗ LBRAT2103	<a href="#">Sociology of the actors and the rural territories</a>	Yves Hanin	(FR) [q1] [30h] [3 Credits] 🌐	X	X
⊗ LSPED2010	<a href="#">Space, settlement and resources</a>	Thierry Eggerickx Etienne Verhaegen	(FR) [q2] [30h] [5 Credits] 🌐	X	X

#### ⊗ Activités en développement territorial

⊗ LBRAT2101	<a href="#">Suburban and rural space development</a>	Pierre Defourny (coord.) Yves Hanin Marie Pairon	(FR) [q1] [45h+15h] [6 Credits] 🌐	X	X
⊗ LBOE2120	<a href="#">Conservation de la biodiversité</a>	Nicolas Schtickzelle	(FR) [q1] [36h+12h] [4 Credits] 🌐	X	X
⊗ LBOE2292	<a href="#">Modélisation écologique et évolutive</a>	Renate Wesselingh	(FR) [q1 or q2] [12h+36h] [4 Credits] 🌐	X	X
⊗ LURBA2915	<a href="#">Planification stratégique (cours - atelier)</a>	Marie-Laurence De Keersmaecker Pierre Defourny Yves Hanin	(FR) [q1] [60h+45h] [8 Credits] △ 🌐	X	X

#### ⊗ Activités en gestion

⊗ LBIRE2102	<a href="#">Applied geomatics</a>	Pierre Defourny	(FR) [q1] [30h+22.5h] [4 Credits] 🌐 > English-friendly	X	X
⊗ LBRAI2210	<a href="#">Microeconomics of Development</a>	Frédéric Gaspart	(EN) [q1] [30h] [3 Credits] 🌐 > French-friendly	X	X
⊗ LENVI2005	<a href="#">Climate change: impacts and solutions</a>	Michel Crucifix Pierre Delmelle (coord.) Kristof Van Oost	(FR) [q2] [30h] [3 Credits] 🌐	X	X
⊗ LENVI2006	<a href="#">Environmental sociology</a>	Brendan Coolsaet	(FR) [q2] [15h+15h] [3 Credits] 🌐	X	X
⊗ LGEO1343	<a href="#">Earth observation by satellite</a>	Eric Lambin	(FR) [q1] [30h+30h] [5 Credits] 🌐	X	X
⊗ LINMA2510	<a href="#">Mathematical ecology</a>	Eric Deleersnijder Emmanuel Hanert Thierry Van Effelterre	(FR) [q2] [30h+22.5h] [5 Credits] ⊕ 🌐 > French-friendly	X	X

**OPTION 4: PUBLIC ADMINISTRATION AND ENVIRONMENT**

- Mandatory
- ⊗ Optional
- △ Not offered in 2023-2024
- ⊖ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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...)

From 15 to 30credit(s)

Year

1 2

**o Content:****⊗ Activité en énergie et environnement**

LENVI2007	<a href="#">Renewable energy sources</a>	Emmanuel De Jaeger Patrick Gerin (coord.) Hervé Jeanmart	EN [q1] [45h+15h] [4 Credits] 🌐 > French-friendly	X	X
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**⊗ Activités en stratégies publiques****⊗ Un cours au choix parmi les intitulés suivants:**

LBRAT2103	<a href="#">Sociology of the actors and the rural territories</a>	Yves Hanin	FR [q1] [30h] [3 Credits] 🌐	X	X
LBRAT2101	<a href="#">Suburban and rural space development</a>	Pierre Defourny (coord.) Yves Hanin Marie Pairon	FR [q1] [45h+15h] [6 Credits] 🌐	X	X
LADPU2225	<a href="#">Environmental Politics and Policies</a>	David Aubin	EN [q2] [30h] [5 Credits] ⊖ 🌐	X	X

**⊗ Un cours au choix parmi les intitulés suivants:**

LURBA2915	<a href="#">Planification stratégique (cours - atelier)</a>	Marie-Laurence De Keersmaecker Pierre Defourny Yves Hanin	FR [q1] [60h+45h] [8 Credits] △ 🌐	X	X
LURBA3011	<a href="#">Acteurs, territoires et contextes de développement</a>		FR [q1] [50h] [5 Credits] △ 🌐	X	X
LENVI2006	<a href="#">Environmental sociology</a>	Brendan Coolsaet	FR [q2] [15h+15h] [3 Credits] 🌐	X	X

**⊗ Activités en traitement et recyclage**

LGCIV2073	<a href="#">Hydrogeology and Geoenvironment</a>	Pierre-Yves Bolly	EN [q1] [30h] [5 Credits] 🌐 > French-friendly	X	X
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**⊗ Activité en risques technologiques**

LMECA2645	<a href="#">Major technological hazards in industrial activity.</a>	Aude Simar	FR [q2] [30h] [3 Credits] 🌐	X	X
LENVI2005	<a href="#">Climate change: impacts and solutions</a>	Michel Crucifix Pierre Delmelle (coord.) Kristof Van Oost	FR [q2] [30h] [3 Credits] 🌐	X	X

**⊗ Activités en santé publique et environnement****⊗ Activités au choix**

LDEMO2610	<a href="#">Populations and health</a>	Bruno Masquelier	FR [q1] [30h] [5 Credits] 🌐	X	X
WFSP2238	<a href="#">Advanced epidemiology</a>	Brecht Devleeschauwer (compensates Niko Speybroeck) Niko Speybroeck	FR [q2] [20h+20h] [5 Credits] 🌐	X	X



## OPTIONAL COURSES

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- Mandatory
- ⊗ Optional
- △ Not offered in 2023-2024
- ⊙ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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...)

From 15 to 30credit(s)

Year

1 2

### o Content:

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#### ⊗ Activité d'enrichissement personnel

Les étudiants peuvent effectuer un stage supplémentaire. Ce stage fait partie intégrante du programme et ne fera l'objet ni de crédits ni d'évaluation. Cette activité est couverte par l'assurance de l'université.

⊗ LBIR2001

Masters Internship

(FR) 🌐 🌐 🌐

x x

## 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, students must take supplementary classes chosen by the faculty to satisfy course prerequisites.**

- Mandatory
- ⊗ Optional
- △ Not offered in 2023-2024
- ⊙ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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 Supplementary classes

Maximum 60 credit(s)

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## 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 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.

## ENVI2M - 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

- > [General access requirements](#)
- > [Specific access requirements](#)
- > [University Bachelors](#)
- > [Non university Bachelors](#)
- > [Holders of a 2nd cycle University degree](#)
- > [Holders of a non-University 2nd cycle degree](#)
- > [Access based on validation of professional experience](#)
- > [Access based on application](#)
- > [Admission and Enrolment Procedures for general registration](#)

### Specific access requirements

L'étudiant doit avoir obtenu au moins 70% des points ou une mention équivalente lors de l'obtention du diplôme qui lui permet d'accéder au master. En outre, son dossier de candidature sera soumis à l'approbation de la commission de gestion du programme.

#### University Bachelors

Diploma	Special Requirements	Access	Remarks
<b>UCLouvain Bachelors</b>			
Titre inconnu:lchim1ba		Access based on application	
<b>Others Bachelors of the French speaking Community of Belgium</b>			
#prog:intitulé:Lmath1ba#		Access based on application	
<b>Bachelors of the Dutch speaking Community of Belgium</b>			
		Access based on application	
<b>Foreign Bachelors</b>			
		Access based on application	

#### Non university Bachelors

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

#### Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	Remarks
<b>"Licenciés"</b>			
		Direct access	
<b>Masters</b>			
		Direct access	En principe, les masters de tous les domaines.

Vu le caractère interdisciplinaire de ce master qui par ailleurs, est très largement accessible aux détenteurs d'un grade de master de tous les domaines, une partie du programme consiste en une liste de cours de base proposés au choix. En fonction du grade de master dont il est porteur et des éventuelles dispenses qui pourront lui être octroyées, l'étudiant inscrira à son programme 0 à 21 crédits de cours repris dans cette liste. Ces cours feront bien sûr partie intégrante de son programme.

## 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.

### Admission and Enrolment Procedures for general registration

L'étudiant doit avoir obtenu au moins 70% des points ou une mention équivalente lors de l'obtention du diplôme qui lui permet d'accéder au master. En outre, son dossier de candidature sera soumis à l'approbation de la commission de gestion du programme.

## Teaching method

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The programme for the Master in Science and Environmental Management includes a group of courses which are designed to provide students with basic knowledge of the different disciplines involved in the management of environmental problems and sustainable development. A significant proportion of the courses are organized by different partner faculties. In this way, courses are given by specialists from each discipline.

The training programme particularly focuses on encouraging students to use their knowledge and skills, through different kinds of individual and group work and also through a large-scale exercise (ENVI 2101, 9 credits) in which students gather evidence about the many different aspects of a real environmental problem they are faced with: they have to become negotiators of technical, socio-economic and institutional solutions between all the involved parties.

Finally, the professional work placement provides a break from academic training, allowing students to put their knowledge and skills into practice to find solutions to real environmental issues.

## 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".**

Examinations for each activity. The precise form is outlined, where necessary, in the relevant course specification.

## Mobility and/or Internationalisation outlook

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There is an active exchange agreement with the University of Sherbrooke (Quebec, Canada).

The programme has traditionally welcomed international students.

## Possible trainings at the end of the programme

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Although it is open to certain bachelors, the Master in Environmental Science and Management should ideally follow a first Master in human sciences, exact sciences or applied sciences. Its strongly interdisciplinary nature will provide second cycle students who wish to have a professional career in environment with useful additional knowledge in the areas of science and integrated management of environmental issues.

Doctoral programmes : this Master does not specifically lead to a doctorate.

## Contacts

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Toute information complémentaire à propos de ce master est à adresser au coordinateur du programme, Prof. P. Gerin, Croix du Sud 2, L7.05.19, 1348 Louvain-la-Neuve, [coordenvi@climate.be](mailto:coordenvi@climate.be).

## Curriculum Management

Faculty

Structure entity

Denomination

Sector

Acronym

Postal address

SST/AGRO

Faculty of bioscience engineering ([AGRO](#))

Sciences and Technology ([SST](#))

AGRO

Croix du Sud 2 - bte L7.05.01

1348 Louvain-la-Neuve

Tel: [+32 \(0\) 10 47 37 19](tel:+32210473719) - Fax: [+32 \(0\) 10 47 47 45](tel:+32210474745)

<http://www.uclouvain.be/agro>

Website

Mandate(s)

- Dean : Christine Dupont
- Administrative director : Carole Dekelver

Commission(s) of programme

- Commission de programme interfacultaire en Sciences et gestion de l'environnement ([ENVI](#))

Academic supervisor: [Patrick Gerin](#)

Jury

- Président de jury: [Charles Bielders](#)

Useful Contact(s)

- Conseiller aux études: [Patrick Gerin](#)

