UCLouvain

ENVI2M

2023 - 2024

ENVI2M - Introduction

Introduction

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 as 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.

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 studies 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.

O 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

				Year 1	2
⛒ LFILO1310	Philosophy of Nature	Alexandre Guay	FR [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	FR [q1] [60h] [2 Credits]	x	x

⛒ Sociology: one course to be chosen
Le cours LPSP1007 est recommandé.

⛒ LPOLS1121	Sociologie du comportement politique	Benoît Rihoux	FR [q2] [22.5h] [4 Credits]	x	x
⛒ LPSP1007	Sociology: education, health and work				

				Year 1	2
⊠ LCOMU2600	Scientific popularisation	Joël Saucin (compensates Jerry Jacques)	FR [q1] [30h] [5 Credits]	x	x

⊠ Anthropologie

⊠ LDVLP2320	Anthropology of development and environment	Emmanuelle Piccoli	FR [q1] [30h] [5 Credits] △	x	x

⊠ 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 Rezsohazy	FR [q2] [15h+15h] [2 Credits]	x	x

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

Year
1 2

⊠ 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	

OPTION 4: PUBLIC ADMINISTRATION AND ENVIRONMENT

- O 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	Year 2
O Content:					
⊠ Activité en énergie et environnement					
⊠ LENVI2007	Renewable energy sources	Emmanuel De Jaeger Patrick Gerin (coord.) Hervé Jeanmart	EN [q1] [45h+15h] [4 Credits] *> French-friendly*	x	x
⊠ Activités en stratégies publiques					
⊠ Un cours au choix parmi les intitulés suivants:					
⊠ LBRAT2103	Sociology of the actors and the rural territories	Yves Hanin	FR [q1] [30h] [3 Credits]	x	x
⊠ LBRAT2101	Suburban and rural space development	Pierre Defourny (coord.) Yves Hanin Marie Pairon	FR [q1] [45h+15h] [6 Credits]	x	x
⊠ LADPU2225	Environmental Politics and Policies	David Aubin	EN [q2] [30h] [5 Credits] ⊘	x	x
⊠ Un cours au choix parmi les intitulés suivants:					
⊠ LURBA2915	Planification stratégique (cours - atelier)	Marie-Laurence De Keersmaecker Pierre Defourny Yves Hanin	FR [q1] [60h+45h] [8 Credits] △	x	x
⊠ LURBA3011	Acteurs, territoires et contextes de développement		FR [q1] [50h] [5 Credits] △	x	x
⊠ LENVI2006	Environmental sociology	Brendan Coolsaet	EN [q2] [15h+15h] [3 Credits]	x	x
⊠ Activités en traitement et recyclage					
⊠ LGCIV2073	Hydrogeology and Geoenvironment	Pierre-Yves Bolly	EN [q1] [30h] [5 Credits] *> French-friendly*	x	x
⊠ Activité en risques technologiques					
⊠ LMECA2645	Major technological hazards in industrial activity.	Aude Simar	FR [q2] [30h] [3 Credits]	x	x
⊠ LENVI2005	Climate change: impacts and solutions	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	Populations and health	Bruno Masquelier	FR [q1] [30h] [5 Credits]	x	x
⊠ WFSP2238	Advanced epidemiology	Brecht Devleesschauwer (compensates Niko Speybroeck) Niko Speybroeck	EN [q2] [20h+20h] [5 Credits]	x	x

OPTIONAL COURSES

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- Open to incoming exchange students
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Click on the course title to see detailed informations (objectives, methods, evaluation...)

From 15 to 30credit(s)

Year

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.

ENVI2M - Information

Access Requirements

Master course admission requirements are defined by the French Community of Belgium Decree of 7 November 2013 defining the hiher 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

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
UCLouvain Bachelors			
Titre inconnu:lchim1ba		Access based on application	
Others Bachelors of the French speaking Community of Belgium			
#prog:intitulé:Lmath1ba#		Access based on application	
Bachelors of the Dutch speaking Community of Belgium			
		Access based on application	
Foreign Bachelors			
		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
"Licenciés"			
		Direct access	
Masters			
		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

Teaching method

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, soci-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

The evaluation methods comply with the

Academic supervisor: Patrick Gerin (https://uclouvain.be/repertoires/patrick.gerin)

Jury

- Président de jury: Charles Bielders (https://uclouvain.be/repertoires/charles.bielders)

Useful Contact(s)

- Conseiller aux études: Patrick Gerin (https://uclouvain.be/repertoires/patrick.gerin)