UCLouvain

ENVI2MC

2024 - 2025

ENVI2MC - Introduction

Introduction

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The Specialization Master in science and management of the environment and sustainable development trains graduates able to dialogue (to understand and to be understood) with experts from different disciplines involved in the management of environmental issues and sustainable development (economics, environmental sciences, ethical, societal and technical aspects in a systemic

ENVI2MC - Teaching profile

Learning outcomes

The specialized master in science and management of the environment and sustainable development offers both recent graduate and experienced professionals the opportunity to learn the basics of environmental science, and the management of environmental issues, which are complex in nature and involve many disciplines. The master is organized to be accessible to graduates (master level) of all faculties, including the sector of science and technology, the sector of human sciences or the health sciences sector, as well as higher schools.

At the end of the training, the graduate in science and management of the environment will be able to contribute to the management of environmental issues: to investigate the problem and analyze it in its entirety, to summarize the positions of the various stakeholders, including experts, communicate them in an understandable way to all parties, synthesize and propose solutions, and argue them to reach a consensus between all stakeholders.

The student's program includes an upgrade based on his or her basic training. This upgrade aims at acquiring basic knowledge in the various disciplines involved in environmental issues: science and technology (chemistry, biology, ecology, computer science, statistics, geography ...) and human sciences (sociology, law, economics, philosophy, etc.).

Part of the program aims to address environmental issues through different disciplines (economics, law, politics, toxicology, science and technology). Finally, part of the program also aims to develop its ability to approach environmental issues between disciplines, integrating their respective contributions (interdisciplinary approach), and to seek and negotiate consensus solutions with different 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 and synthetize 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, statistics, geography, etc. related to the environmental issue.
1.4 To use basic theoretical concepts in 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 them into the analysis.
1.6 To establish links between the basic concepts in science and technology and the human sciences to understand and 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, taking into account the technological and non-technological aspects.

2.1 To synthesize various 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 of solutions to the environmental issue with the support of stakeholders, by combining the data and scientific, technical / technological and non-technical approaches available.
2.4 To select in a substantiated way (self-assessment) the proposals for solutions that best fulfil the different dimensions of the environmental issue (scientific, technical / technological and non-technical).
2.5 To project herself/himself in the position of the different stakeholders and, in relation with 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 orally and in writing, in a substantiated manner using modern communication techniques.
3.2 To adapt the language and specific vocabulary taking into consideration the cultural differences of the conversational partners: colleagues, general public, scientific experts, non-governmental organisations, public authorities, business representatives, etc.

4. To negotiate a consensual environmental solution between 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 through argumentation on a common solution to the environmental issue.
4.4 To make choices, alone or within a team, taking into account all the dimensions and all the stakeholders, targeting to reach a consensual solution.

Programme structure

The program of the interdisciplinary Specialized Master in science and management of the environment and sustainable development is structured as follows:

Year
1 2

				Year 1	2
⊠ LMAT1271	Calculation of probability and statistical analysis	Rainer von Sachs	FR [q2] [30h+30h] [6 Credits] > *English-friendly*	x	x

⊠ Anglais

2 crédits minimum parmi les unités d'enseignement suivantes. Les étudiants·es qui n'ont pas de dispense de cours d'anglais DOIVENT contacter le Professeur d'anglais AU DEBUT DU 1E QUADRIMESTRE pour déterminer le cours le plus adapté à leur situation. A priori, le choix 00 -1 0 44.9000015fera dan 'ordrglaisla TJted stpossitu adi-ds Ao40 soitseieJ 1 0 0 situaner ls adapt LANGL1000..007 23.200001 m 69.94cm 1

Year
1 2

LENVI2002

				Year 1	2
⛒ LMAPR2001A	Project "chemical & materials engineering for a sustainable future"	Juray De Wilde Pascal Jacques Alain Jonas Patricia Luis Alconero Samuel Poncé	EN [q2] [22.5h+30h] [5 Credits] *> French-friendly*	x	x
⛒ LMAPR2647	Sustainable treatment of industrial and domestic waste: Fundamentals	Olivier Françoisse Patricia Luis Alconero Olivier Noiset Benoît Stenuit	EN [q1] [30h+15h] [5 Credits] *> French-friendly*	x	x

⛒ Activités en climat : état, pression et réponses

⛒ LBIR1328	Climatology and hydrology applied to agronomy and the environment	Alice Alonso (coord.) Charles Bielders (coord.) Hugues Goosse	EN [q1] [45h+22.5h] [6 Credits] *> French-friendly*	x	x

⛒ Un cours au choix parmi les deux suivants :
Le cours LPHYS2162 peut également être suivi en partie pour 3 crédits.

[redacted]					

				Year 1	Year 2
⊠ Un cours au choix parmi les deux suivants :					
⊠ LDEMO2610	Populations and health	Bruno Masquelier	FR [q1] [30h] [5 Credits]	x	x
⊠ WFSP2238P	Advanced epidemiology (UCLouvain)	Niko Speybroeck	EN [q2] [20h+16h] [4 Credits]	x	x
⊠ Activités d'intégration professionnelle et de diversification *Les étudiant·es qui voudraient suivre d'autres unités d'enseignement en lien avec l'environnement et le développement durable peuvent en faire la proposition au coordinateur.*					
○ LBIR2004	Masters Internship	Damien Debecker (coord.) Xavier DrayeXavier4u 1 0 0 1 45.039001 0 l S Q q 1 0 0 1 -3.834 41.99599 d 2 w			

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.

ENVI2MC - Information

Access Requirements

In the event of the divergence between the different linguistic versions of the present conditions, the French version shall prevail.
Decree of 7 November 2013 defining the landscape of higher education and the academic organization of studies.
The admission requirements must be met prior to enrolment in the University.

Unless explicitly mentioned, the bachelor's, master's and licentiate degrees listed 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

Translated from https://www.gallilex.cfwb.be/fr/leg_res_01.php?ncda=39681&referant=l02

Art. 112. of the quv1 0 BT /F22,0.2745 0a7 landscape of higher education and the academic organization of studies.

- Commission de programme - Master Bioingénieur-Chimie et bioindustries (BIRC)
- Commission de programme - Master Bioingénieur-Sciences & technologies de l'environnement (BIRE)
- Commission de programme - Bachelier en sciences de l'ingénieur, orientation bioingénieur (CBIR)
- Commission de programme interfacultaire en Sciences et gestion de l'environnement (ENVI)
- Fermes universitaires de Louvain (FERM)

Academic supervisor: Patrick Gerin

Jury

- Président de jury: Quentin Ponette

Useful Contact(s)

- Conseiller aux études: Patrick Gerin