



## SAIV2M - Introduction

### Introduction

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Master [120] in Agriculture and Bio-industries develops

- the ability to analyze and diagnose agronomic problems
- ability to understand multi-scale and multi-disciplinary processes
- the ability to manage integrated projects in dialogue with other specialists.

It trains graduates who are able to critically mobilize a body of knowledge and know-how in agronomic and economic sciences to formulate, analyze and solve a multidisciplinary problem in these fields.

At the end of this Master's degree, you will be able to design relevant and innovative technological and scientific solutions for the development of products, process systems or services in this field of specialization.

#### Your profile

This **Master's programme** is for you if you are interested in:

- the relevance, diversity and career opportunities contained in this Master's programme,
- the international feature of the programme, attracting students with diverse backgrounds from all over the world and preparing professionals for a future global job market,
- the opportunity to study in two different partner universities in two European countries and, for the program AFEPA, acquire a double or joint Master's degree.

#### Your future job

**Graduates** from this Master's programme are well qualified to take responsibilities in international, national and regional agencies, non-governmental organisations, consultancy firms, professional organisations and private companies with a focus in policy design, analysis and implementation. Because of the research orientation of this Master's programme, they are also well prepared for doctoral studies.

#### Your programme

This Master's programme is structured in four blocks of teaching and learning activities totalling 120 ECTS credits.

It offers basic knowledge and skills and options to choose from at UCL or at a partner university.

Two professional focus are possible:

- Professional focus in soil sciences (MISOL)
- Professional focus: Agricultural, Food and Environmental Analysis (AFEPA)

The MISSOL program is an international master's degree initiated by Sorbonne Universities. It is designed to allow you to spend an exchange year in one of the 3 partner universities:

- University Antananarivo (Madagascar)
- University Nangui Abrogoua, Abidjan (Côte d'Ivoire)
- University science and technology, Hanoi (Vietnam).

If you are selected, this exchange can be funded by an Erasmus + grant.

Structure of the program MISSOL

1. A core set of compulsory learning activities for 40 ECTS credits (Master's thesis, two summer schools)
2. A professional focus of compulsory courses for 30 ECTS credits
3. 50 ECTS credits to be chosen in a list of courses

The AFEPA program is an international master's degree which involves different universities:

The main partner universities are:

- Università Cattolica del Sacro Cuore (UCSC) in Milano, Italy
- Rheinische Friedrich-Wilhelms-Universität (UBonn) in Bonn, Germany
- Swedish University of Agricultural Sciences (SLU) in Uppsala, Sweden
- Université catholique de Louvain (UCLouvain) in Louvain-la-neuve, Belgium

The following universities are associated with the program:

- Pontificia Universidad Católica (PUC) in Santiago, Chile
- University of Alberta (UALberta) in Edmonton, Canada
- Universitat Politècnica de Catalunya (UPC) in Barcelona, Spain
- African Economic Research Consortium (AERC) in Nairobi, Kenya

If you are selected, this exchange can be funded by an Erasmus + grant.

Structure of the program AFEPA

1. A core set of compulsory learning activities for 40 ECTS credits (Master's thesis, two summer schools)

2. A professional focus of compulsory courses for 30 ECTS credits (microeconomic theory, agricultural and trade policy, quantitative methods)
3. An option with optional courses for 30 ECTS credits that can be grouped into five subject areas:
  - i. agri-food and trade policy (at UCL and partner universities)
  - ii. development policy at UCL (at UCL and partner universities)
  - iii. environmental and natural resource policy (at partner universities)
  - iv. agribusiness and market analysis (at partner universities)
  - v. market and consumer research (at partner universities)

## SAIV2M - Teaching profile

### Learning outcomes

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By the end of this Master's programme, the graduate student is:

1. aware of the economic, social and environmental dimensions of the performance and competitiveness of the agricultural and food sectors and other profit (market) and non-profit (non-market) activities in rural areas,



				Year	
				1	2
LBRAI2208	Firms and Markets : Strategic Analysis	Frédéric Gaspart	EN [q1] [30h] [5 Credits] > French-friendly		X
LBRAI2210	Microeconomics of Development	Frédéric Gaspart	EN [q1] [30h] [4 Credits] > French-friendly	X	X
LBRAI2212	Economics of Rural Development	Goedele Van den Broeck	EN [q1] [30h] [4 Credits] > French-friendly	X	X
LBRAI2213	Impact evaluation in agriculture	Goedele Van den Broeck	EN [q2] [30h+8h] [4 Credits] > French-friendly		X
LECGE1316	Econometrics	William Parienté (compensates Muriel Dejemepe)	FR [q1] [30h+15h] [5 Credits]		X
LECON2031	Applied Econometrics : Time Series	Francesca Monti	EN [q1] [30h+12h] [5 Credits]	X	X
LECON2033	Applied econometrics: Microeconometrics	Bertrand Verheyden (compensates Muriel Dejemepe)	FR [q1] [30h+12h] [5 Credits]		X
LECON2041	International Trade	Gonzague Vannoorenberghe	EN [q2] [30h] [5 Credits]		X
LECON2314	Economic Geography	Joseph Gomes	EN [q2] [30h] [5 Credits]	X	X
LECON2353	Labour Productivity	Vincent Vandenberghe	EN [q2] [30h] [5 Credits]		X
LECON2411	Norms and Public Intervention <i>Course taught at Namur (UNamur)</i>	Javier Olivera Angulo (compensates François Maniquet)	EN [q2] [30h] [5 Credits]		X
LECON2607	Public Economics	Jean Hindriks	EN [q2] [30h] [5 Credits]		X
LECON2828	Structural change, inequality, and development <i>Course taught at UCLouvain / Course description available on UNamur ECONM828 / https://directory.unamur.be/teaching/courses/ECONM828</i>		EN [q2] [30h] [5 Credits]	X	X
LECON2865	Trade Policy and International Cooperation <i>Course taught at UCLouvain / Course description available on UNamur ECONM865 / https://directory.unamur.be/teaching/courses/ECONM865</i>		EN [q2] [30h] [5 Credits]		X
LGEO1321	Geography of rural areas: land use, environment, nature	Patrick Meyfroidt	FR [q2] [30h+15h] [5 Credits] > English-friendly	X	X
LGEO2130	Fundamentals of geographic and environmental modelling	Eric Deleersnijder Sophie Vanwambeke	FR [q2] [30h+30h] [5 Credits]	X	X
LINGE1221	Econometrics	Sébastien Van Bellegem	FR [q2] [30h+15h] [5 Credits]		X

✂ Programme pour la finalité "GISciences and EO for Environmental Modelling and Management (GEM)" (60 credits)

L'étudiant-e suit le programme détaillé sur le site GEM MSC <https://www.gem-msc.eu/programme-structure/>  
From 0 to 0 credit(s)

✂ Programme pour la finalité spécialisée Sciences du sol (MISSOL) (60 credits)

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	
LBIR1336	Soil science and integrated excursions	Yannick Agnan (coord.) Richard Lambert Caroline Vincke	FR [q2] [30h+37.5h] [5 Credits] > English-friendly	X	
LBIRE2105	Assessment of water - soil - air quality	Yannick Agnan (coord.) Philippe Maetz Xavier Rollin	FR [q1] [30h+0h] [3 Credits]	X	
LBIRE2131	Environmental Impact Assessment : diagnosis and indicators	Charles Bielders (coord.) Pierre Defourny Pierre Defourny (compensates Charles Bielders) Lisa Delfosse (compensates Charles Bielders)	FR [q2] [22.5h] [3 Credits]	X	
LBRES2101	Smart technologies for environmental engineering	Sébastien Lambot	EN [q1] [32.5h+20h] [4 Credits] > French-friendly	X	
LBRES2104	IRRIGATION AND DRAINAGE	Mathieu Javaux	FR [q2] [22.5h+22.5h] [5 Credits]	X	



## ***LIST OF FOCUSES***

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- > Professional Focus: Agricultural, Food and Environmental Policy Analysis [*en-prog-2024-saiv2m-lsaiv220s*]
  - > Professional Focus: Geo-Information Science and Earth Observation for Environmental Modelling and Management [*en-prog-2024-saiv2m-lsaiv230s*]
  - > Professional Focus: Soil Science [*en-prog-2024-saiv2m-lsaiv210s*]
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**PROFESSIONAL FOCUS: GEO-INFORMATION SCIENCE AND  
EARTH OBSERVATION FOR ENVIRONMENTAL MODELLING AND  
MANAGEMENT [30.0]**

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**PROFESSIONAL FOCUS: SOIL SCIENCE [30.0]**

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- Mandatory
  - ✘ Optional
  - △ Not offered in 2024-2025
  - ⊙
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## SAIV2M - 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

#### Admission conditions

General and specific admission requirements for this Master's programme must be satisfied at the time of enrolling at UCLouvain:

1. having acquired a Bachelor's degree or an equivalent academic degree of minimum three years of undergraduate study corresponding to 180 ECTS credits;
2. having followed courses in mathematics, statistics and economics at an introductory level is mandatory; having an additional introduction to agricultural, environmental or food sciences is recommended;
3. proofing English proficiency at the minimum level of B2 of the Common European Framework of Reference for Languages (see [www.coe.int/en/web/portfolio](http://www.coe.int/en/web/portfolio)).

Applicants not meeting these admission conditions need to follow additional supplementary courses. The modified study programme will be established with the Study Adviser of the Faculty.

The admission to the inter-university AFEPA programme is subject to specific conditions including English proficiency at the minimum level of a TOEFL score of 550 (paper version) or 80 (internet version) or an overall band IELTS score of 6.5 with no sectional score below 5.5 or with a signal deemed equivalent. Notwithstanding these admission criteria, individual partner institutions reserve their right to determine the final admission eligibility of each applicant. Applicants are requested to respect deadlines for their application. Additional information is provided at <https://www.ilr1.uni-bonn.de/afepa/en>

### University Bachelors

Diploma	Special Requirements	Access	Remarks
UCLouvain Bachelors			
Bachelor in Geography : General		Access based on application	See <a href="https://www.ilr1.uni-bonn.de/afepa/en">https://www.ilr1.uni-bonn.de/afepa/en</a>
Bachelor in Bioengineering		Access based on application	
Bachelor in Economics and Management (Louvain-la-Neuve)		Access based on application	

Bachelor in Economics and Management



## Admission and Enrolment Procedures for general registration

## 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 are assessed according to the activities in the programme : this can take the form of written and/or oral examinations as well as individual and/or group work.

Further details about how the assessment is done can be found in the course specifications.

## Mobility and/or Internationalisation outlook

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The master in Agriculture and Bio-industries is an interuniversity master.

Students registered in this Master's programme have the possibility to spend a study or research period at other institutions and may be able to integrate their academic credits earned into their academic curriculum at one of these partner institutions.

This master can lead to the issuance of the Master in Agriculture and Bio-industries together with the issuance of a second master from a partner university provided that a sufficient number of credits have been acquired in this university.

The master in Agriculture and Bio-industries develops:

- the ability to analyze agronomic problems
- the ability to understand different processes
- the ability to manage projects with other specialists.

At the end of this master, you will be able to find relevant, innovative and scientific solutions to help the development of products, process systems or services in this area of specialization.

Two professional focus are possible:

- Professional focus in soil sciences ([MISOL](#))
- Professional focus: Agricultural, Food and Environmental Analysis ([AFEPA](#))

## Possible trainings at the end of the programme

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Possible trainings at the end of the programme

Successful completion of this Master's programme enables direct entry to other training programmes in the second and third cycles.

- Advanced Masters: the Advanced Masters in the field authorized by regulations in addition to those established by the University Development Commission (ARES-CCD) in the same field.
- Doctoral programmes: doctorate in Agronomic Science and Biological Engineering and other fields and universities subject to admission.

## Contacts

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For more information about this programme, please contact Professor Frédéric Gaspart at - [frederic.gaspart@uclouvain.be](mailto:frederic.gaspart@uclouvain.be)

## Curriculum Management



