



## SAIV2M - Introduction

### Introduction

#### Introduction

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)
4. A set of supplementary courses, including a language course, for 20 ECTS credits.

The language of instruction and examination is English for all the courses at SLU, UAlberta, UBonn and UCSC, and for most of the courses at UCL and UPC, but in Spanish for most of the courses at PUC. Examination can be organized in English at all partners.

## SAIV2M - Teaching profile

### Learning outcomes

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,
2. able to understand the fundamentals of recent economic theory as well as its strengths and weaknesses,
3. able to use and apply adequate methods and tools to address and analyse socio-economic and environmental problems that are observed or anticipated in the agricultural and food sectors and rural areas in different development contexts,
4. able to use complementary approaches from other disciplines when needed,
5. able to perform sound quantitative economic analysis and anticipate possible effects of policy and regulation reforms,
6. able to interpret results and derive policy implications and recommendations,
7. able to draw from European experience and expertise in designing and evaluating policy and regulatory reforms given the economic, social, environmental and ethical dimensions of the issues facing societies expressing structural change, and
8. able to communicate their methods and results to both specialised and non-specialised audiences, in at least two European languages.

The main objective of this Master's programme is that graduates be qualified to use and apply adequate methods to analyse socio-economic problems, formulate policy recommendations and understand the risks and consequences of any given economic policy measures, especially those oriented to the agricultural and food sector, rural areas as well as natural resources and their environment. In particular, graduates are expected to be able to use and develop quantitative methods to perform rigorous socio-economic and environmental assessments of these public policies, and provide sound and relevant policy recommendations to a better sustainable development of rural areas.

### Programme structure

Le programme est formé par :

- le tronc commun (dont le contenu varie en cas de participation au programme AFEPA)
- la finalité spécialisée (dont le contenu varie en cas de participation au programme AFEPA)
- une filière à choisir parmi 6 et comprenant une option et son ou ses complément(s) d'option
- un complément d'option interdisciplinaire en création d'entreprise accessible quelle que soit l'option
- la possibilité de faire un stage d'insertion socio-professionnelle.

\*La participation au programme [Erasmus Mundus interuniversitaire AFEPA](#) (**Agricultural, Food and Environmental Policy Analysis**) fait également l'objet d'une sélection.

## SAIV2M Programme

### Detailed programme by subject

**CORE COURSES [90.0]**

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- Mandatory
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○ Activités spécifiques pour le programme AFEPA si l'étudiant-e vient en deuxième année de master (30 credits)

○ 6 crédits d'activités obligatoires (6 credits)

○ LBRAI2218	Special Topics in Agricultural Economics	Frédéric Gaspard	EN [q2] [30h+22.5h] [6 Credits]  > French-friendly	X
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○ 24 crédits minimum à choisir parmi les activités suivantes : (24 credits)

⌘ LBIR2004A	Masters Internship	Damien Debecker Xavier Draye François Gaspard Anne-Laure Jacquemart	FR [q2] [] [6 Credits]  > English-friendly	X
⌘ LBIRA2105	Agricultural and rural policies	Goedele Van den Broeck	EN [q1] [30h] [3 Credits]  > French-friendly	X
⌘ LBIRA2109	Agrarian systems and farm	Pierre Bertin	FR [q1] [30h+0h] [5 Credits]  > English-friendly	X
⌘ LBIRE2102B	Applied geomatics - Partim B	Pierre Defourny	FR [q1] [22.5h+7.5h] [3 Credits]  > French-friendly	X
⌘ LBIRE2205A	Decision tools and project management - Decision tools	Raphaël Amory Frédéric Gaspard	EN [q1] [22.5h+7.5h] [3 Credits]  > French-friendly	X
⌘ LBRAI2208	Firms and Markets : Strategic Analysis	Frédéric Gaspard	EN [q1] [30h] [5 Credits]  > French-friendly	X
⌘ LBRAI2210	Microeconomics of Development	Frédéric Gaspard	EN [q1] [30h] [3 Credits]  > French-friendly	X
⌘ LBRAI2212	Economics of Rural Development	Goedele Van den Broeck	EN [q1] [30h] [3 Credits]  > French-friendly	X
⌘ LBRAI2213	Impact evaluation in agriculture	Goedele Van den Broeck	EN [q2] [30h+8h] [4 Credits]  > French-friendly	X
⌘ LBRES2204	Integrated water management of water resources	François Jonard Marnik Vanclooster (coord.)	FR [q1] [22.5h+22.5h] [4 Credits] 	



## LIST OF FOCUSES

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- > Professional Focus: Agricultural, Food and Environmental Policy Analysis [ en-prog-2023-saiv2m-lsaiv220s ]
- > Professional Focus: Soil Science [ en-prog-2023-saiv2m-lsaiv210s ]
- > Professional Focus: Geo-Information Science and Earth Observation for Environmental Modelling and Management [ en-prog-2023-saiv2m-lsaiv230s ]

## PROFESSIONAL FOCUS: AGRICULTURAL, FOOD AND ENVIRONMENTAL POLICY ANALYSIS [30.0]

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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...)

Year

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**PROFESSIONAL FOCUS: GEO-INFORMATION SCIENCE AND  
EARTH OBSERVATION FOR ENVIRONMENTAL MODELLING AND  
MANAGEMENT [30.0]**

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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 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.

Access based on application in sciences

**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

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- > [Specific access requirements](#)
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- > [Holders of a 2nd cycle University degree](#)
- > [Holders of a non-University 2nd cycle degree](#)
- > [Access based on validation of professional experience](#)
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- > [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 UCL:

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; and
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

## University Bachelors

Diploma	Special Requirements	Access	Remarks
<b>UCLouvain Bachelors</b>			
Bachelier en sciences géographiques	voir <a href="http://www.uclouvain.be/afepa">www.uclouvain.be/afepa</a>	Access based on application	
Bachelier en sciences économiques	voir <a href="http://www.uclouvain.be/afepa">www.uclouvain.be/afepa</a>	Access based on application	
BIR1BA	voir <a href="http://www.uclouvain.be/afepa">www.uclouvain.be/afepa</a>		

Bachelier en sciences de l'ingénieur, orientation bioingénieur	voir <a href="http://www.uclouvain.be/afepa">www.uclouvain.be/afepa</a>	Access based on application
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#### Bachelors of the Dutch speaking Community of Belgium

Tout grade de bachelier en sciences sociales, économiques, agronomiques, géographiques et/ou environnementales	voir <a href="http://www.uclouvain.be/afepa">www.uclouvain.be/afepa</a>	Access based on application
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#### Foreign Bachelors

Tout grade de bachelier en sciences sociales, économiques, agronomiques, géographiques et/ou environnementales	voir <a href="http://www.uclouvain.be/afepa">www.uclouvain.be/afepa</a>	Access based on application
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### Non university Bachelors

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

Diploma	Access	Remarks
BA en agronomie, orientation agro-industries et biotechnologies - crédits supplémentaires entre 30 et 45	Les enseignements supplémentaires éventuels peuvent être consultés dans <a href="#">le module complémentaire</a> .	Type court
BA en agronomie, orientation agronomie des régions chaudes - crédits supplémentaires entre 30 et 45		
BA en agronomie, orientation environnement - crédits supplémentaires entre 30 et 45		
BA en agronomie, orientation forêt et nature - crédits supplémentaires entre 30 et 45		
BA en agronomie, orientation techniques et gestion agricoles - crédits supplémentaires entre 30 et 45		
BA en agronomie, orientation techniques et gestion horticoles - crédits supplémentaires entre 30 et 45		
BA en agronomie, orientation technologie animale - crédits supplémentaires entre 30 et 45		
BA en chimie, orientation biochimie - crédits supplémentaires entre 30 et 45		
BA en chimie, orientation biotechnologie - crédits supplémentaires entre 30 et 45		
BA en chimie, orientation chimie appliquée - crédits supplémentaires entre 30 et 45		
BA en chimie, orientation environnement - crédits supplémentaires entre 30 et 45		

### Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	
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## Teaching method

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**L'interdisciplinarité** et **l'approche intégrée** sont des dimensions essentielles dans la formation des **bioingénieurs en sciences agronomiques**.

Ces dimensions sont soutenues par :

- l'offre d'enseignements organisés par d'autres Facultés ;
- l'offre d'enseignements en anglais;
- le regroupement d'activités de formation : exercices intégrés, projet intégré, analyses de situations réelles, mises en situation ;
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