

TROP2MC

2013 - 2014

Advanced Master in Tropical and Subtropical Culture

Protection

At Louvain-la-Neuve - 60 credits - 1 year - Day schedule - In frenchDissertation/Graduation Project : **YES** - Internship : **YES**Activities in English: **NO** - Activities in other languages : **NO**Activities on other sites : **YES**Main study domain : **Sciences agronomiques et ingénierie biologique**Organized by: **Faculté d'ingénierie biologique, agronomique et
environnementale (AGRO)**Programme code: **trop2mc** - European Qualifications Framework (EQF): 7**Table of contents**

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TROP2MC - Introduction

TROP2MC - Admission

For the specific conditions of this program : refer to the French version

Decree of March 31st 2004 defining higher education, favoring its integration in the European framework of higher education and refinancing universities.

The admission requirements have to be met at the time of enrolment at the university.

All information can be obtained from the [University's Enrolment Office \(Service des inscriptions – SIC\)](#).

The following students, after meeting the conditions set by the academic authorities, have access to the complementary Master's degree with the aim of obtaining the grade that these studies sanction:

- An academic Master's degree within the same field allowing 2nd-cycle studies, including at least 120 credits
- An academic Master's degree, following a decision by the academic authorities, under the complementary conditions that they set and as a result of a motivated decision by the jury
- An academic grade which is similar to those mentioned above, issued by the Flemish Community, the German Community or the Royal Military Academy, under the same conditions
- A foreign academic grade that has been acknowledged as being equivalent to those mentioned above, in application of this decree, a European-level directive or an international convention, under the same conditions
- Under the same conditions, one or several titles or academic grade issued by the Flemish Community, the German Community or the Royal Military Academy, sanctioning 2nd-cycle studies and valued at least 300 credits by the jury, or sanctioning 2nd-cycle studies and valued at least 240 credits completed of 60 credits, the all that must be valued by the jury according to the decree of March 31st, 2004 (art 54, 5 °)

In the event of the divergence between the different linguistic versions of the present conditions, the French version shall prevail

TROP2MC - Information

Learning outcomes

This programme is designed to train and update professionals working in the field of crop protection, especially in tropical countries. The Advanced Master aims to offer interdisciplinary training which provides students with :

1. a global view of the special features of the biology and ecology of bio-agressors as well as their interactions with plants and the environment,
2. a global and integrated view of different protection strategies,
3. the ability to think in terms of context and synthesis, to put theoretical knowledge and analytical procedures into practice in a perspective of taking action,
4. the ability to identify the biological, phytotechnic and socio-economic factors to take into account in the resolution of crop protection problems.

Teaching method

Understanding problems of plant protection is based on mastery of a large number of disciplines. There are various institutions involved in the organization of the Advanced Master. This enables the different aspects of phytopathology, entomology and the phytopharmacy of tropical and subtropical crops to be thoroughly covered. The collegial nature of the teaching, based on teaching teams (cfr. programme) should help students to acquire the necessary cross-disciplinary skills. In addition, both the Belgian and French lecturers have experience of countries in the Southern hemisphere: this strengthens the syllabus relating to the phytotechnic and socio-economic factors to consider when solving problems of crop protection.

Student exchange is an important part of the programme (Standing Committee for University Co-operation towards Development grants for students from Southern hemisphere countries, student exchanges particularly with France â€™ ENSAM and CNEARC), as well as exchanges of lecturers between institutions (cross-participation in UCL/FUSAGx courses).

There are currently many other forms of exchange between students and staff (e.g. ERASMUS and North/South exchanges) : the Advanced Master is also expected to rapidly become one of them.

Some of the teaching sessions are based on a problem-solving approach with case studies which put studentsâ€™ prior experience to use.

The e-learning site, iCampus, is used to coordinate special teaching sessions.

Evaluation

Students are assessed in different ways, set out in the programme. Assessment can take the form of written and/or oral examinations, or through individual and/or group work.

Mobility and/or Internationalisation outlook

This Advanced Master has a clear international outlook. Part of the course is held at ENSAM in Montpellier (France), where it is also possible to do the placement-dissertation.

The target audience for which this Advanced Master is designed is also international. For example, in 2004 the Standing Committee for University Co-operation towards Development received 70 applications from North Africa (Algeria, Tunisia, and Morocco), West Africa (Senegal, Mali, Niger, Benin, Ivory Coast, Cameroon, and Nigeria), Central Africa (Democratic Republic of Congo, Burundi, and Rwanda) and Haiti. The participation of foreign students with a wide range of professional experience enriches the syllabus, particularly in the courses based on making use of prior experience. The language of instruction for the Advanced Master is French. However a passive knowledge of English is required as a prerequisite.

Possible trainings at the end of the programme

This programme may only be taken after gaining a first Masterâ€™s degree for 2nd cycle studies worth at least 300 credits. It may lead to doctoral training.

TROP2MC - Contacts

Curriculum Managment

Entite de la structure AGRO

Sigle	AGRO	
Dénomination	Faculté des bioingénieurs	
Adresse	Croix du Sud, 2 bte L7.05.01 1348 Louvain-la-Neuve Tél 010 47 37 19 - Fax 010 47 47 45	
Site web	https://www.uclouvain.be/agro	
Secteur	Secteur des sciences et technologies (SST)	
Faculté	Faculté des bioingénieurs (AGRO)	
Mandats	Philippe Baret Christine Devlesaver	Doyen Directeur administratif de faculté
Commissions de programme	Commission de programme - Master Bioingénieur-Sciences agronomiques (BIRA) 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)	

Academic Supervisor : [Claude Bragard](#)

Jury

Président de jury : [Philippe Lepoivre](#) (Tel: 32 (0) 81 622 433)

Secrétaire de jury : **Claude Bragard**

Usefull Contacts

TROP2MC - Detailed programme

Programme structure

The workload is as follows :

Compulsory courses and seminars : 42 credits, divided into two semesters of courses and distributed between the three major institutions of the Advanced Master, the Catholic University of Louvain, the Faculty of Agriculture in Gembloux and the National School for Higher Education in Agricultural Sciences in Montpellier.

The final assignment is a piece of research work or a professional work placement equivalent to 18 credits.

Schematic description of the programme :

The programme lasts for a complete academic year. It comprises two semesters of courses which represent two thirds of the programme, during which students take two additional course modules:

1. Characterization of bio-agressors and diagnosis techniques (21 credits). The first part (at the FUSAGx campus and UCL) introduces the general concepts in crop protection and examines the different kinds of losses caused by plant aggressors, the main groups of aggressors responsible for plant damage, special features in their biology and their relationship with plants.
2. Analysis of sustainable attack strategies and case study (21 credits). The second part introduces protection strategies against bio-agressors. While there is a mainly monodisciplinary approach to the subjects on the first part of the syllabus, the second part examines topics differently, requiring students to adopt a systemic approach to problems. These special modules are made up of case studies which enable students to acquire cross-disciplinary skills through a series of learning situations focused on the solution of real problems.
3. Final assignment (18 credits). The third part requires students to demonstrate their ability to use the knowledge they have acquired in the context of either a research placement or the preparation of a project, depending on their choice:

- the research placement

§ the experimental research placement enables students to familiarize themselves with the work of a research team on a problem relating to the protection of tropical crops. It enables them to use the knowledge they have acquired in the context of a piece of scientific research (ability to analyze the context of the problem in every dimension, understand the methodology adopted and analyze the team's results).

§ Each placement is supervised by a member of the teaching staff from the Advanced Master and the placement director (the scientist in charge of the laboratory). The placement forms the subject of a written report submitted to the placement director and an oral presentation. Individual assessment of students is undertaken by a group of lecturers (from at least two institutions) whose expertise relates to the subject area of the placement, together with the president of the examining board.

§ The list of research placements is available to students at the beginning of the year.

The project relates to an issue suggested by the student. It is supervised by a team of lecturers and/or researchers under the direction of a lecturer who acts as project director. The project enables students to make use, in a synthetic way, of the knowledge they have acquired to solve a problem relating to crop protection. Each project forms the subject of a written report submitted to the project director and an oral presentation. Individual assessment of students is undertaken by a group of lecturers (from at least two institutions) whose expertise relates to the subject area of the placement, together with the president of the examining board.

Core study

[> Programme détaillé](#) [en-prog-2013-trop2mc-ltrop210t.html]

Programme by subject

Core courses [60.0]

○ Mandatory

△ Courses not taught during 2013-2014

⊕ Periodic courses taught during 2013-2014

⊗ Optional

⊙ Periodic courses not taught during 2013-2014

⊞ Two years course

Click on the course title to see detailed informations (objectives, methods, evaluation...)

○ Travail de fin d'études (18 credits)

○ LTROP3900	Travail de fin d'études	N.	18 Credits
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o Caractérisation des bio-agresseurs

○ LBIRA2106	Principles of phytiatry	Claude Bragard (coord.), Anne Legrève	30h	3 Credits	1q
○ LTROP2301	Bactérioses en phytopathologie tropicale	Claude Bragard	20h	2 Credits	2q
○ LBRPP2101A	Biologie des bactéries : champignons, nématodes phytopathogènes	N.	45h	3 Credits	2q
○ LGBLX3401	Agents phytopathogènes : les virus	N.	18h	1.5 Credits	1q
○ LGBLX3402	Les plantes parasites	N.	9h	1.5 Credits	1q

o Techniques de diagnostic des bio-agresseurs

○ LBRPP2205A	Clinique des plantes: diagnostic et recommandations (partim)	N.	30h	3 Credits	1+2q
○ LGBLX3403	Technique de diagnostic en entomologie	N.	15h	2 Credits	1q
○ LGBLX3405	Techniques de diagnostic en phytopathologie	N.	18h	2 Credits	1q
○ LGBLX3404	Systématique et écologie des insectes	N.	30h	2 Credits	1q

o Analyse des stratégies durables de lutte

○ LBRPP2206A	Lutte biologique et protection intégrée	N.	18h	1 Credits	1q
○ LBRPP2207	Epidemiology and warning systems in plant pathology	Anne Legrève	30h	2 Credits	2q
○ LGBLX3406	Entomologie appliquée à l'agriculture	N.	30h+15h	3 Credits	1q
○ LGBLX3407	Aspects réglementaires de la protection des cultures	N.	18h	2 Credits	2q
○ LGBLX3408	Lutte biologique et protection intégrée : partim 1	N.	18h	1 Credits	1q
○ LGBLX3409	Protection intégrée des produits récoltés	N.	27h	2 Credits	2q
○ LGBLX3410	Cycle de projets appliqués à la protection des cultures	N.	9h	1 Credits	2q
○ LGBLX3411	Risques liés à l'emploi des produits phytopharmaceutiques et biocides	N.	24h	2 Credits	1q

o Etude de cas (8 credits)

○ LENSA3301	Modalité d'application de la protection intégrée aux cultures tropicales et subtropicales	N.	90h	8 Credits	2q
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