

FARM2M

2015 - 2016

Master [120] in Pharmacy

At Bruxelles Woluwe - 120 credits - 2 years - Day schedule - In frenchDissertation/Graduation Project : **YES** - Internship : **optional**Activities in English: **NO** - Activities in other languages : **NO**Activities on other sites : **NO**Main study domain : **Sciences biomédicales et pharmaceutiques**Organized by: **Faculté de pharmacie et des sciences biomédicales (FASB)**Programme code: **farm2m** - Francophone Certification Framework: 7**Table of contents**

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FARM2M - Introduction

Introduction

FARM2M - Teaching profile

Learning outcomes

As actors in the field of health sciences, pharmacists are experts on the subject of medication.

From design to production, from pharmaceutical research to marketing the product, from collating information to distributing it, pharmacy graduates are preparing for employment as pharmacists in a number of professional environments, at each stage of the medication process.

This Master's programme is designed to produce health professionals in such diverse environments as the pharmacy (dispensary) open to the public, the academic world, hospitals or industry. This diversity is based on a solid scientific framework which ultimately seeks to improve patient health.

The training offered by the School of Pharmacy relies on the combined expertise of instructors who are researchers and instructors who are practitioners. It provides students with a number of opportunities to develop their know-how and their ability to master the various roles of the modern pharmacist: laboratories, work placements, research projects and classes are all included in the two years of the Master's programme.

On successful completion of this programme, each student is able to :

1. Pharmaceutical expertise: display command of and assimilate the knowledge required to formulate a pertinent response to any pharmaceutical question

1a. Display command of and apply the fundamental principles and essential concepts of the basic sciences in the practice of pharmacy.

1b. Assimilate a specialised knowledge base in chemistry, pharmacognosy, pharmacology, toxicology and galenic pharmacy useful in the synthesis, design, formulation, evaluation, dispensing and control of medicinal drugs.

1c. Assimilate and use a detailed knowledge base in nutrition, pathology, pharmacotherapy, therapeutics and semiology in order to understand patients in all their complexity.

2. In the preparation and dispensing of medications: act in an appropriate and responsible manner in line with procedures

2a. Dispense medications in a responsible manner in order to achieve general health objectives such as the prevention, identification and treatment of problems related to the use of medications, in collaboration with other health professionals and the patient.

2b. Select an appropriate response and apply a solution in their professional practice, in particular to

- formulate, produce and control a medication

- develop a pharmaceutical care plan *

2c. Comply with the legal, ethical and deontological requirements so as to act in a responsible and professional manner for the patient and society.

2d. Be the first responder in an emergency situation.

3. Health advice: offer appropriate advice when dispensing medicine and monitor progress

3a. Evaluate the situation taking into consideration elements related to the patient, scientific and medical aspects and socio-economic factors.

3b. Monitor the selected response and apply any necessary modifications.

3c. Collect and communicate information relating to the safety of use of the medication (pharmacovigilance).

3d. Operate as part of a multidisciplinary team.

4. Communication: communicate in a professional manner and tailor the message to suit different audiences

4a. Converse effectively and respectfully, demonstrating active listening and empathy in their relationships with patients.

4b. Tailor their communication to the target audience in order to obtain and provide clear information.

4c. Use information and communication technologies appropriately with regard to their professional practice.

4d. Respect confidentiality in their professional practice.

5. Scientific approach: resolve health-related problems by incorporating and analysing, in a critical manner, different scientific approaches

- 5a. Understand a complex pharmaceutical problem or issue.
- 5b. Summarise the key and necessary elements related to the problem or issue concerned.
- 5c. Display command of the relevant and pertinent tools and sources of information related to the problem or issue concerned.
- 5d. Analyse, understand and compare specialised information in a critical and expert manner.
- 5e. Select an appropriate response and apply a solution in their professional practice, in particular to design and validate an experimental protocol.

6. Sense of responsibility: act in an ethical and responsible manner

- 6a. Incorporate a knowledge base of ethics, legislation, deontology and pharmaco-economics.
- 6b. Conduct themselves as key and responsible actors, with public health issues a priority concern.
- 6c. Identify the competent professional to whom a request outside the scope of their activities should be transferred.

7. Quality: evaluate, self-assess and update their knowledge and improve their practice

- 7a. Develop a self-assessment approach to define their training needs in order to respond to complex situations.
- 7b. Identify and utilise individual and collective lifelong learning tools in an independent, critical and robust manner.
- 7c. Update and expand their knowledge base and skills independently to ensure that their knowledge and practices are constantly improved.
- 7d. Evaluate the work of colleagues to contribute to the improvement of knowledge and practices.

Programme structure

The programme (120 credits) comprises core subjects (74 credits), a focus (30 credits) and an option course (16 credits).

Apart from the core subjects which are compulsory for everyone, students may choose :

- a focus : either the professional focus which provides training for professional pharmacists, or the research focus which is theoretical and practical training for research in pharmacy. The two focuses enable students to gain the professional status of pharmacist.

- one option course from the following five :

dispensing and pharmaceutical monitoring

innovation and design of drugs

production, checking and regulation

biopharmacy and pharmacotoxicology

research in pharmacy. This option course is only open to students doing the research focus.

The contents of the different parts of the programme are outlined below.

For a programme-type, and regardless of the focus, options/or elective courses selected, this master will carry a minimum of 120 credits divided over two annual units, corresponding to 60 credits each.

[> Core courses](#) [en-prog-2015-farm2m-wfarm200t.html]

Focuses

[> Finalité approfondie](#) [en-prog-2015-farm2m-wfarm200a]

[> Finalité spécialisée](#) [en-prog-2015-farm2m-wfarm201s]

Options courses

[> Option délivrance et suivi pharmaceutique](#) [en-prog-2015-farm2m-wfarm202o.html]

[> Option innovation et conception du médicament](#) [en-prog-2015-farm2m-wfarm203o.html]

[> Option production, contrôle et réglementation](#) [en-prog-2015-farm2m-wfarm204o.html]

[> Option biopharmacie et pharmacotoxicologie](#) [en-prog-2015-farm2m-wfarm205o.html]

[> Option recherches en sciences pharmaceutiques](#) [en-prog-2015-farm2m-wfarm206o.html]

FARM2M Detailed programme

Programme by subject

CORE COURSES [74.0]

○ Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊖ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

						Year	
						1	2
○ WFARM2117	Analyse et contrôle de qualité des médicaments	Joëlle Leclercq (coord.), Giulio Muccioli	30h	3 Credits	1q	x	
○ WFARM2118	Chimie médicinale	Raphaël Frédéric , Didier Lambert , Giulio Muccioli (coord.)	30h	3 Credits	2q	x	
○ WFARM2139	Pharmacogenomics and toxicology	Pedro Buc Calderon (coord.), Vincent Haufroid	37.5h	4 Credits	1q	x	
○ WFARM2149	Pharmaceutical approach in nutrition	Nathalie Delzenne	30h+15h	3 Credits	1q	x	
○ WFARM2156	Pharmacie galénique 1re partie	Michel Deleers (compensates Véronique Prat), Véronique Pr�at	40h	5 Credits	1q	x	
○ WFARM2157	Pharmacie gal�nique 2e partie	V�ronique Pr�at (coord.), Rita Vanbever	20h+28h	5 Credits	2q	x	
○ WFARM2114	Pharmacologie sp�ciale et �l�ments de pharmacoth�rapie 1re partie	Olivier Feron , Emmanuel Hermans , Jean-Christophe Jonas , Fran�oise Van Bambeke (coord.)	30h	3 Credits	1q	x	
○ WFARM2116	Pharmacologie sp�ciale et �l�ments de pharmacoth�rapie 2e partie	Chantal Dessy , Olivier Feron , Fran�oise Van Bambeke (coord.)	26h	3 Credits	2q	x	
○ WFARM2111	S�minaire de pharmacoth�rapie int�gr�e (1re partie)	Chantal Dessy , Olivier Feron , Emmanuel Hermans , Jean-Christophe Jonas , Anne Spinewine , Fran�oise Van Bambeke (coord.)	30h+15h	5 Credits	1 + 2q	x	
○ WFARM2236	Pharmacie et soci�t�	Paulo Jorge Dos Santos Rodrigues (compensates Eric Gaziaux), Catherine Druetz (compensates Marie- Paule Mingeot), Eric Gaziaux , Christian L�onard (compensates Marie- Paule Mingeot), Marie-Paule Mingeot (coord.), Luc Roegiers , Thierry Roisin (compensates Marie- Paule Mingeot)	37.5h	4 Credits	1q		x

Year

1 2

○ WFARM2239	Sémiologie 🟡	Stéphan Clément de Cléty, Chantal Lefebvre	30h	4 Credits	1q		x
○ WFARM2255	Soins pharmaceutiques en officine et stage 🟡	Valérie Lacour	15h+40h	12 Credits			x
○ WFARM2209	Mémoire en sciences pharmaceutiques	N.		18 Credits			x

○ Sciences religieuses

L'étudiant choisit un cours parmi les 3 suivants :

⊗ LTECO2101	Questions of religious sciences: biblical readings	Claude Lichtert	15h	2 Credits	1q	x	
⊗ LTECO2102	Questions of religious sciences: reflections about christian faith	Paulo Jorge Dos Santos Rodrigues, Arnaud Join-Lambert	15h	2 Credits	1q	x	
⊗ LTECO2103	Questions of religious sciences: questions about ethics	Eric Gaziaux, Dominique Jacquemin (compensates Eric Gaziaux)	15h	2 Credits	1q	x	

LIST OF FOCUSES

Une finalité à choisir parmi les deux suivantes :

- > Finalité approfondie [en-prog-2015-farm2m-wfarm200a]
 > Finalité spécialisée [en-prog-2015-farm2m-wfarm201s]

FINALITÉ APPROFONDIE [30.0]

○ Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊖ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

						Year	
						1	2
○ WFARM2171	Travail expérimental de recherche en sciences pharmaceutiques (1re partie)	N.		3 Credits	1q	x	
○ WFARM2175	Etude critique d'un article de recherche en sciences pharmaceutiques	Pedro Buc Calderon, Anne des Rieux, Raphaël Frédéric, Bernard Gallez (coord.), Joëlle Leclercq, Marie-Paule Mingeot, Giulio Muccioli, Giulio Muccioli (compensates Joëlle Leclercq), Véronique Prémat, Pierre Sonveaux, Françoise Van Bambeke	40h	4 Credits	2q	x	
○ WFARM2176	Présentation d'un travail de recherche en sciences pharmaceutiques	Pedro Buc Calderon, Anne des Rieux, Raphaël Frédéric, Bernard Gallez (coord.), Joëlle Leclercq, Marie-Paule Mingeot, Giulio Muccioli, Giulio Muccioli (compensates Joëlle Leclercq), Véronique Prémat, Pierre Sonveaux, Françoise Van Bambeke	20h+30h	8 Credits	2q	x	
○ WFARM2271	Travail expérimental de recherche en sciences pharmaceutiques (2e partie) ■	N.		13 Credits	1q		x
○ WFARM2275	Exercice de communication scientifique ■	Pedro Buc Calderon, Anne des Rieux (compensates Véronique Prémat), Raphaël Frédéric, Bernard Gallez (coord.), Joëlle Leclercq, Marie-Paule Mingeot, Giulio Muccioli, Giulio Muccioli (compensates Joëlle Leclercq), Véronique Prémat, Pierre Sonveaux, Françoise Van Bambeke	10h+10h	2 Credits	1q		x

FINALITÉ SPÉCIALISÉE [30.0]

● Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊖ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

						Year	
						1	2
● WFARM2135	Practical exercises integred of pharmaceutical sciences	Laure Elens, Raphaël Frédérick, Joëlle Leclercq (coord.), Giulio Muccioli, Véronique Prémat	0h+160h	9 Credits	1 + 2q	x	
● WFARM2196	Rational therapeutic choices (Introduction to evidence-based medicine and pharmacoconomy)	Bruno Krug, Anne Spinewine	30h+10h	4 Credits	1q	x	
⊗ WFARM2134	Gestion des situations aigües	Eddy Bodart, Caroline Boulouffe, Louis De Canniere, Dominique Vanpee (coord.)	15h	2 Credits	1q	x	x
● WFARM2241	Pharmacokinetics and clinical biology	Laure Elens, Pierre Wallemacq (coord.)	30h+15h	4 Credits	1q		x
● WFARM2210	Contact en milieu professionnel (stage 1 mois)	N.		4 Credits	1q		x
● WFARM2235	PRACTICAL TRAINING IN PHARMACEUTICAL TECHNOLOGY	Fabienne Danhier (compensates V&eacute;ronique Pr&eacute;at), Véronique Prémat	0h+120h	5 Credits	1q		x
● WFARM2211	Séminaire de pharmacothérapie intégrée (2e partie) ■	Guy Beuken, Olivia Dalleur, Chantal Dessy, Olivier Feron, Emmanuel Hermans, null SOMEBODY, Françoise Van Bambeke (coord.)	0h+22.5h	2 Credits	1q		x

OPTIONS [16.0]

L'étudiant choisit une option parmi les cinq options suivantes :

- > [Option délivrance et suivi pharmaceutique \[en-prog-2015-farm2m-wfarm202o \]](#)
- > [Option innovation et conception du médicament \[en-prog-2015-farm2m-wfarm203o \]](#)
- > [Option production, contrôle et réglementation \[en-prog-2015-farm2m-wfarm204o \]](#)
- > [Option biopharmacie et pharmacotoxicologie \[en-prog-2015-farm2m-wfarm205o \]](#)
- > [Option recherches en sciences pharmaceutiques \[en-prog-2015-farm2m-wfarm206o \]](#)

OPTION DÉLIVRANCE ET SUIVI PHARMACEUTIQUE [16.0]

Typiquement orientée vers la formation à la pharmacie officinale, cette option permet d'approfondir les connaissances en tant que pharmacien-conseil du bon usage du médicament, que ce soit au domicile du patient ou en milieu hospitalier.

- Mandatory
 △ Courses not taught during 2015-2016
 ⊕ Periodic courses taught during 2015-2016
- ☒ Optional
 ⊖ Periodic courses not taught during 2015-2016
 ■ Activity with requisites

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

Year

1 2

○ Cours obligatoires (10 credits)

○ WFARM2123	Complément de pharmacothérapie (grossesse, allaitement, gériatrie)	Chantal Dessy, Emmanuel Hermans, Anne Spinewine (coord.)	30h+15h	3 Credits	2q	x	
○ WFARM2223	Pharmaceutical integration seminar (indications, pharmaceutical technology and advices) ■	Nathalie Delzenne, Anne des Rieux, Olivier Feron, Bernard Gallez, Emmanuel Hermans (coord.), Joëlle Leclercq, Marie-Paule Mingeot, Giulio Muccioli, Jacques Poupaert (compensates Joëlle Leclercq), Rita Vanbever	0h+40h	7 Credits	1q		x

○ Cours au choix (6 credits)

L'étudiant choisit 2 cours dans la liste suivante. Avec l'accord du conseiller aux études, un autre cours pourrait être choisi mais la compatibilité horaire avec l'ensemble du programme pourrait ne pas être assurée.

☒ WFARM2104	GOOD MANUFACTURING AND GOOD LABORATORY PRACTICE	Catherine Delvenne (compensates Véronique Prévot), Joëlle Leclercq (coord.), Véronique Prévot	30h+15h	3 Credits	2q	x	
☒ WFARM2128	Processus de découverte, de développement et de mise sur le marché du médicament	Raphaël Frédéric (compensates Didier Lambert), Didier Lambert, Joëlle Leclercq, Marie-Paule Mingeot (compensates Didier Lambert), Françoise Van Bambeke (coord.)	30h+15h	3 Credits	2q	x	
☒ WFARM2180	Organotoxicity : molecular, cellular and functional aspects	Pedro Buc Calderon (coord.), Olivier Feron, Philippe Hantson	30h+15h	3 Credits	2q	x	
☒ WFARM2504	DERMOPHARMACY	Marie Baeck (coord.), Valérie Dekeuleneer, Lilianne Marot, Véronique Prévot, Isabelle Tromme	20h+10h	3 Credits	2q	x	
☒ WFARM2507	Introduction to pharmaceutical management	Yannick Biot	20h+10h	3 Credits	2q	x	
☒ WFARM2509	Alternative medicines	Christophe Chantrain, Emmanuel Hermans, Joëlle Leclercq (coord.), Anne Spinewine	20h+10h	3 Credits	2q	x	
☒ WFARM2510	Veterinary drugs	Jean-Paul Dehoux, Isabelle Donnay, Françoise Van Bambeke (coord.)	20h+10h	3 Credits	2q	x	
☒ WFARM2512	NEW DRUG DELIVERY SYSTEMS	Patrick Couvreur, Anne des Rieux, Véronique Prévot (coord.), Rita Vanbever	20h+10h	3 Credits	2q	x	

						Year	
						1	2
⊗ WFARM2514	Pharmacodépendance et toxicomanie	Pedro Buc Calderon, Philippe de Timary, Philippe Hantson, Vincent Hautroid, Emmanuel Hermans (coord.), Didier Lambert, Peter Starkel, Miikka Viikkula, Pierre Wallemacq	20h+10h	3 Credits	2q	x	
⊗ WFARM2519	Produits issus des biotechnologies et vaccins	N.	20h+10h	3 Credits	2q Δ	x	
⊗ WFARM2521	Recherche translationnelle : de la dysfonction biologique à la validation de nouveaux traitements	Emmanuel Hermans, Marie-Paule Mingeot (coord.), Pierre Sonveaux	20h+10h	3 Credits	2q	x	
⊗ WFARM2517	Biomatériaux et ingénierie tissulaire	Anne des Rieux (coord.), Gaëtane Leloup	20h+10h	3 Credits	2q Δ	x	

OPTION INNOVATION ET CONCEPTION DU MÉDICAMENT [16.0]

En envisageant les premiers stades de développement du médicament, depuis sa découverte jusqu'aux étapes de recherche préclinique, cette option met l'accent sur la conception des futurs nouveaux médicaments dans les laboratoires de recherche.

○ Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊖ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

Year

1 2

o Cours obligatoires (10 credits)

○ WFARM2128	Processus de découverte, de développement et de mise sur le marché du médicament	Raphaël Frédéric (compensates Didier Lambert), Didier Lambert, Joëlle Leclercq, Marie-Paule Mingeot (compensates Didier Lambert), Françoise Van Bambeke (coord.)	30h+15h	3 Credits	2q	x	
○ WFARM2224	Pharmaceutical integration seminar (preclinical research)	Nathalie Delzenne, Anne des Rieux, Olivier Feron, Bernard Gallez, Emmanuel Hermans (coord.), Joëlle Leclercq, Marie-Paule Mingeot, Giulio Muccioli, Jacques Poupaert (compensates Joëlle Leclercq), Rita Vanbever	0h+40h	7 Credits	1q		x

o Cours au choix (6 credits)

L'étudiant choisit 2 cours dans la liste suivante. Avec l'accord du conseiller aux études, un autre cours pourrait être choisi mais la compatibilité horaire avec l'ensemble du programme pourrait ne pas être assurée.

⊗ WFARM2104	GOOD MANUFACTURING AND GOOD LABORATORY PRACTICE	Catherine Delvenne (compensates Véronique Prévost), Joëlle Leclercq (coord.), Véronique Prévost	30h+15h	3 Credits	2q	x	
⊗ WFARM2123	Complément de pharmacothérapie (grossesse, allaitement, gériatrie)	Chantal Dessy, Emmanuel Hermans, Anne Spinewine (coord.)	30h+15h	3 Credits	2q	x	
⊗ WFARM2500	Instrumental analysis : cases study	Marie-France Herent, Giulio Muccioli (coord.)	20h+10h	3 Credits	2q	x	
⊗ WFARM2501	Chimie pharmaceutique avancée et drug design	Raphaël Frédéric, Didier Lambert, Giulio Muccioli (coord.)	20h+10h	3 Credits	2q	x	
⊗ WFARM2503	Complements of pharmacognosy and of analysis of pharmacologically interesting natural substances.	Joëlle Leclercq	20h+10h	3 Credits	2q	x	
⊗ WFARM2508	Isolation of Natural Products and Structural Analysis	Joëlle Leclercq (coord.), Giulio Muccioli	20h+10h	3 Credits	2q	x	
⊗ WFARM2511	Méthodologie des mesures radio-actives en recherche pharmaceutique et biomédicale	Bernard Gallez	20h+10h	3 Credits	2q	x	
⊗ WFARM2515	Pharmacologie moléculaire	Olivier Feron, Emmanuel Hermans (coord.), Didier Lambert, Marie-Paule Mingeot, Pierre Sonveaux	20h+10h	3 Credits	2q	x	
⊗ WFARM2519	Produits issus des biotechnologies et vaccins	N.	20h+10h	3 Credits	2q △	x	

						Year	
						1	2
⊗ WFARM2521	Recherche translationnelle : de la dysfonction biologique à la validation de nouveaux traitements	Emmanuel Hermans, Marie-Paule Mingeot (coord.), Pierre Sonveaux	20h+10h	3 Credits	2q	x	
⊗ WFARM2517	Biomatériaux et ingénierie tissulaire	Anne des Rieux (coord.), Gaëtane Leloup	20h+10h	3 Credits	2q Δ	x	

OPTION PRODUCTION, CONTRÔLE ET RÉGLEMENTATION [16.0]

Cette option regroupe les cours en rapport immédiat avec les activités spécifiques des pharmaciens dans l'industrie.

○ Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊖ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

Year

1 2

○ Cours obligatoires (10 credits)

○ WFARM2225	Pharmaceutical integration seminar (formulation, production and control)	Nathalie Delzenne, Anne des Rieux, Olivier Feron, Bernard Gallez, Emmanuel Hermans (coord.), Joëlle Leclercq, Marie-Paule Mingeot, Giulio Muccioli, Jacques Poupaert (compensates Joëlle Leclercq), Rita Vanbever	0h+40h	7 Credits	1q		x
○ WFARM2104	GOOD MANUFACTURING AND GOOD LABORATORY PRACTICE	Catherine Delvenne (compensates Véronique Prévot), Joëlle Leclercq (coord.), Véronique Prévot	30h+15h	3 Credits	2q		x

○ Cours au choix (6 credits)

L'étudiant choisit 2 cours dans la liste suivante. Avec l'accord du conseiller aux études, un autre cours pourrait être choisi mais la compatibilité horaire avec l'ensemble du programme pourrait ne pas être assurée.

⊗ WFARM2123	Complément de pharmacothérapie (grossesse, allaitement, gériatrie)	Chantal Dessy, Emmanuel Hermans, Anne Spinewine (coord.)	30h+15h	3 Credits	2q		x
⊗ WFARM2128	Processus de découverte, de développement et de mise sur le marché du médicament	Raphaël Frédéric (compensates Didier Lambert), Didier Lambert, Joëlle Leclercq, Marie-Paule Mingeot (compensates Didier Lambert), Françoise Van Bambeke (coord.)	30h+15h	3 Credits	2q		x
⊗ WFARM2180	Organotoxicity : molecular, cellular and functional aspects	Pedro Buc Calderon (coord.), Olivier Feron, Philippe Hantson	30h+15h	3 Credits	2q		x
⊗ WFARM2500	Instrumental analysis : cases study	Marie-France Herent, Giulio Muccioli (coord.)	20h+10h	3 Credits	2q		x
⊗ WFARM2506	Formes pharmaceutiques et biodisponibilité	Laure Elens, Véronique Prévot (coord.)	20h+10h	3 Credits	2q		x
⊗ WFARM2508	Isolation of Natural Products and Structural Analysis	Joëlle Leclercq (coord.), Giulio Muccioli	20h+10h	3 Credits	2q		x
⊗ WFARM2512	NEW DRUG DELIVERY SYSTEMS	Patrick Couvreur, Anne des Rieux, Véronique Prévot (coord.), Rita Vanbever	20h+10h	3 Credits	2q		x
⊗ WFARM2516	Pharmacotechnie	N.	20h+10h	3 Credits	2q	△	x

OPTION BIOPHARMACIE ET PHARMACOTOXICOLOGIE [16.0]

Au travers d'une formation complémentaire en pharmacocinétique et toxicologie, cette option vise à mieux connaître le destin du médicament dans l'organisme, ainsi qu'à mieux en comprendre l'éventuelle toxicité.

○ Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊖ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

Year

1 2

○ Cours obligatoires (10 credits)

○ WFARM2180	Organotoxicity : molecular, cellular and functional aspects	Pedro Buc Calderon (coord.), Olivier Feron, Philippe Hantson	30h+15h	3 Credits	2q	x	
○ WFARM2228	Seminar of pharmaceutical integration (pharmacokinetic, toxicology and clinical biology)	Nathalie Delzenne, Anne des Rieux, Olivier Feron, Bernard Gallez, Emmanuel Hermans (coord.), Joëlle Leclercq, Marie-Paule Mingeot, Giulio Muccioli, Jacques Poupaert (compensates Joëlle Leclercq), Rita Vanbever	0h+40h	7 Credits	1q		x

○ Cours au choix (6 credits)

L'étudiant choisit 2 cours dans la liste suivante. Avec l'accord du conseiller aux études, un autre cours pourrait être choisi mais la compatibilité horaire avec l'ensemble du programme pourrait ne pas être assurée.

⊗ WFARM2104	GOOD MANUFACTURING AND GOOD LABORATORY PRACTICE	Catherine Delvenne (compensates Véronique Prévost), Joëlle Leclercq (coord.), Véronique Prémat	30h+15h	3 Credits	2q	x	
⊗ WFARM2123	Complément de pharmacothérapie (grossesse, allaitement, gériatrie)	Chantal Dessy, Emmanuel Hermans, Anne Spinewine (coord.)	30h+15h	3 Credits	2q	x	
⊗ WFARM2128	Processus de découverte, de développement et de mise sur le marché du médicament	Raphaël Frédéric (compensates Didier Lambert), Didier Lambert, Joëlle Leclercq, Marie-Paule Mingeot (compensates Didier Lambert), Françoise Van Bambeke (coord.)	30h+15h	3 Credits	2q	x	
⊗ WFARM2502	Further development in analytical toxicology and phytopharmacy	Pierre Wallemacq	20h+10h	3 Credits	2q	x	
⊗ WFARM2504	DERMOPHARMACY	Marie Baeck (coord.), Valérie Dekeuleneer, Lilianne Marot, Véronique Prémat, Isabelle Tromme	20h+10h	3 Credits	2q	x	
⊗ WFARM2506	Formes pharmaceutiques et biodisponibilité	Laure Elens, Véronique Prémat (coord.)	20h+10h	3 Credits	2q	x	
⊗ WFARM2511	Méthodologie des mesures radio-actives en recherche pharmaceutique et biomédicale	Bernard Gallez	20h+10h	3 Credits	2q	x	
⊗ WFARM2512	NEW DRUG DELIVERY SYSTEMS	Patrick Couvreur, Anne des Rieux, Véronique Prémat (coord.), Rita Vanbever	20h+10h	3 Credits	2q	x	

						Year	
						1	2
⊗ WFARM2513	Pharmacocinétique approfondie	Laure Elens	20h+10h	3 Credits	2q	x	
⊗ WFARM2514	Pharmacodépendance et toxicomanie	Pedro Buc Calderon, Philippe Hantson, Vincent Hauroid, Emmanuel Hermans (coord.), Didier Lambert, Peter Starkel, Miikka Vikkula, Pierre Wallemacq	20h+10h	3 Credits	2q	x	
⊗ WFARM2515	Pharmacologie moléculaire	Olivier Feron, Emmanuel Hermans (coord.), Didier Lambert, Marie-Paule Mingeot, Pierre Sonveaux	20h+10h	3 Credits	2q	x	
⊗ WFARM2517	Biomatériaux et ingénierie tissulaire	Anne des Rieux (coord.), Gaëtane Leloup	20h+10h	3 Credits	2q Δ	x	

OPTION RECHERCHES EN SCIENCES PHARMACEUTIQUES [16.0]

Réservée aux étudiants en finalité approfondie, cette option comprend un enseignement spécifique en biostatistique ainsi qu'un large éventail de cours au choix permettant d'approfondir certains domaines des sciences pharmaceutiques en rapport direct avec le projet de recherche.

● Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊖ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

Year

1 2

○ Cours obligatoire (10 credits)

Course ID	Course Title	Instructor(s)	Hours	Credits	Period	Year 1	Year 2
WFARM2177	Biostatistics	Laure Elens	20h+10h	3 Credits	2q	x	
WFARM2238	Séminaire d'intégration pharmaceutique (recherche)	Nathalie Delzenne, Anne des Rieux, Olivier Feron, Bernard Gallez, Emmanuel Hermans (coord.), Joëlle Leclercq, Marie-Paule Mingeot, Giulio Muccioli, Jacques Poupaert (compensates Joëlle Leclercq), Rita Vanbever	0h+40h	7 Credits	1q		x

○ Cours au choix (6 credits)

L'étudiant choisit des cours pour un total de 6 crédits dans la liste suivante. Avec l'accord du conseiller aux études, un autre cours pourrait être choisi mais la compatibilité horaire avec l'ensemble du programme pourrait ne pas être assurée.

WFARM1370	Formation à la communication scientifique	Timothy Byrne (coord.), Olivia Dalleur	15h+30h	4 Credits	2q	x	
WFARM2104	GOOD MANUFACTURING AND GOOD LABORATORY PRACTICE	Catherine Delvenne (compensates Véronique Prévost), Joëlle Leclercq (coord.), Véronique Prévost	30h+15h	3 Credits	2q	x	
WFARM2111	Séminaire de pharmacothérapie intégrée (1re partie)	Chantal Dessy, Olivier Feron, Emmanuel Hermans, Jean-Christophe Jonas, Anne Spinewine, Françoise Van Bambeke (coord.)	30h+15h	2 Credits	1 + 2q	x	
WFARM2123	Complément de pharmacothérapie (grossesse, allaitement, gériatrie)	Chantal Dessy, Emmanuel Hermans, Anne Spinewine (coord.)	30h+15h	3 Credits	2q	x	
WFARM2128	Processus de découverte, de développement et de mise sur le marché du médicament	Raphaël Frédéric (compensates Didier Lambert), Didier Lambert, Joëlle Leclercq, Marie-Paule Mingeot (compensates Didier Lambert), Françoise Van Bambeke (coord.)	30h+15h	3 Credits	2q	x	
WFARM2180	Organotoxicity : molecular, cellular and functional aspects	Pedro Buc Calderon (coord.), Olivier Feron, Philippe Hantson	30h+15h	3 Credits	2q	x	

							Year	
							1	2
WFARM2211	Séminaire de pharmacothérapie intégrée (2e partie) 🟡	Guy Beuken, Olivia Dalleur, Chantal Dessy, Olivier Feron, Emmanuel Hermans, null SOMEBODY, Françoise Van Bambeke (coord.)	0h+22.5h	2 Credits	1q		x	
WFARM2500	Instrumental analysis : cases study	Marie-France Herent, Giulio Muccioli (coord.)	20h+10h	3 Credits	2q		x	
WFARM2501	Chimie pharmaceutique avancée et drug design	Raphaël Frédéric, Didier Lambert, Giulio Muccioli (coord.)	20h+10h	3 Credits	2q		x	
WFARM2502	Further development in analytical toxicology and phytopharmacy	Pierre Wallemacq	20h+10h	3 Credits	2q		x	
WFARM2503	Complements of pharmacognosy and of analysis of pharmacologically interesting natural substances.	Joëlle Leclercq	20h+10h	3 Credits	2q		x	
WFARM2504	DERMOPHARMACY	Marie Baeck (coord.), Valérie Dekeuleneer, Lilianne Marot, Véronique Prétat, Isabelle Tromme	20h+10h	3 Credits	2q		x	
WFARM2506	Formes pharmaceutiques et biodisponibilité	Laure Elens, Véronique Prétat (coord.)	20h+10h	3 Credits	2q		x	
WFARM2507	Introduction to pharmaceutical management	Yannick Biot	20h+10h	3 Credits	2q		x	
WFARM2508	Isolation of Natural Products and Structural Analysis	Joëlle Leclercq (coord.), Giulio Muccioli	20h+10h	3 Credits	2q		x	
WFARM2509	Alternative medicines	Christophe Chantrain, Emmanuel Hermans, Joëlle Leclercq (coord.), Anne Spinewine	20h+10h	3 Credits	2q		x	
WFARM2510	Veterinary drugs	Jean-Paul Dehoux, Isabelle Donnay, Françoise Van Bambeke (coord.)	20h+10h	3 Credits	2q		x	
WFARM2511	Méthodologie des mesures radio-actives en recherche pharmaceutique et biomédicale	Bernard Gallez	20h+10h	3 Credits	2q		x	
WFARM2512	NEW DRUG DELIVERY SYSTEMS	Patrick Couvreur, Anne des Rieux, Véronique Prétat (coord.), Rita Vanbever	20h+10h	3 Credits	2q		x	
WFARM2513	Pharmacocinétique approfondie	Laure Elens	20h+10h	3 Credits	2q		x	
WFARM2514	Pharmacodépendance et toxicomanie	Pedro Buc Calderon, Philippe de Timary, Philippe Hantson, Vincent Haufroid, Emmanuel Hermans (coord.), Didier Lambert, Peter Starkel, Miikka Vikkula, Pierre Wallemacq	20h+10h	3 Credits	2q		x	
WFARM2515	Pharmacologie moléculaire	Olivier Feron, Emmanuel Hermans (coord.), Didier Lambert, Marie-Paule Mingeot, Pierre Sonveaux	20h+10h	3 Credits	2q		x	
WFARM2516	Pharmacotechnie	N.	20h+10h	3 Credits	2q	Δ	x	
WFARM2519	Produits issus des biotechnologies et vaccins	N.	20h+10h	3 Credits	2q	Δ	x	
WFARM2520	Principes et applications biophysique des méthodes de spectroscopie de résonance magnétique nucléaire et électronique	Bernard Gallez, Bénédicte Jordan (coord.)	20h+10h	3 Credits	2q		x	

						Year	
						1	2
⊗ WFARM2521	Recherche translationnelle : de la dysfonction biologique à la validation de nouveaux traitements	Emmanuel Hermans, Marie-Paule Mingeot (coord.), Pierre Sonveaux	20h+10h	3 Credits	2q	x	
⊗ WFARM2517	Biomatériaux et ingénierie tissulaire	Anne des Rieux (coord.), Gaëtane Leloup	20h+10h	3 Credits	2q Δ	x	

Course prerequisites

A document entitled [en-prerequis-2015-farm2m.pdf](#) specifies the activities (course units - CU) with one or more pre-requisite(s) within the study programme, that is the CU whose learning outcomes must have been certified and for which the credits must have been granted by the jury before the student is authorised to sign up for that activity.

These activities are identified in the study programme: their title is followed by a yellow square.

As the prerequisites are a requirement of enrolment, there are none within a year of a course.

The prerequisites are defined for the CUs for different years and therefore influence the order in which the student can enrol in the programme's CUs.

In addition, when the panel validates a student's individual programme at the beginning of the year, it ensures the consistency of the individual programme:

- It can change a prerequisite into a corequisite within a single year (to allow studies to be continued with an adequate annual load);
- It can require the student to combine enrolment in two separate CUs it considers necessary for educational purposes.

For more information, please consult [regulation of studies and exams](#).

The programme's courses and learning outcomes

For each UCL training programme, a [reference framework of learning outcomes](#) specifies the competences expected of every graduate on completion of the programme. You can see the contribution of each teaching unit to the programme's reference framework of learning outcomes in the document "In which teaching units are the competences and learning outcomes in the programme's reference framework developed and mastered by the student?"

The document is available by clicking [this link](#) after being authenticated with UCL account.

FARM2M - Information

Admission

General and specific admission requirements for this program must be satisfied at the time of enrolling at the university..

Pour les étudiants issus de tout autre programme que ceux repris dans les conditions d'admission, un dossier mentionnant les motivations et les crédits obtenus au cours des études précédentes est à soumettre à la commission d'admission de l'Ecole de pharmacie pour le 10 septembre au plus tard.

- [University Bachelors](#)
- [Non university Bachelors](#)
- [Holders of a 2nd cycle University degree](#)
- [Holders of a non-University 2nd cycle degree](#)
- [Adults taking up their university training](#)
- [Personalized access](#)

University Bachelors

Diploma	Special Requirements	Access	Remarks
UCL Bachelors			
Bachelor in Pharmacy		Direct access	
Bachelor in Dentistry Bachelor in Medecine Bachelor in Bioengineering		On the file: direct access or access with additional training	
Bachelor in Chemistry Bachelor in Biomedicine	Minor in Medication Sciences [30.0](unknown URL)	On the file: direct access or access with additional training	
Bachelor in Chemistry Bachelor in Biomedicine		On the file: direct access or access with additional training	
Others Bachelors of the French speaking Community of Belgium			
Bachelier en sciences pharmaceutiques		Direct access	
Bacheliers en sciences dentaires Bachelier en médecine Bachelier en sciences de l'ingénieur, orientation bioingénieur Bachelier en sciences biomédicales Bachelier en sciences chimiques		On the file: direct access or access with additional training	
Bachelors of the Dutch speaking Community of Belgium			
Bachelier en sciences pharmaceutiques		Direct access	Connaissance du français
Bacheliers en sciences dentaires Bachelier en médecine Bachelier en sciences de l'ingénieur, orientation bioingénieur Bachelier en sciences biomédicales Bachelier en sciences chimiques		On the file: direct access or access with additional training	Connaissance du français
Foreign Bachelors			

Diplômes équivalents au bachelier en sciences pharmaceutiques		On the file: direct access or access with additional training	Connaissance du français
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— Non university Bachelors

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

— Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	Remarks
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"Licenciés"

Pharmaciens		Direct access	
Médecins Bioingénieurs Dentistes Licenciés en sciences biomédicales Licenciés en chimie		On the file: direct access or access with additional training	

Masters

Master [120] in Pharmacy		Direct access	
Master [120] in Biomedicine Master [240] in Medecine Master [120] in Dentistry Master [120] in Chemistry Master [120] in Chemistry and Bio-industries		On the file: direct access or access with additional training	

— Holders of a non-University 2nd cycle degree

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

Adults taking up their university training

> See the website www.uclouvain.be/en-vae

Tous les masters peuvent être accessibles selon la procédure de valorisation des acquis de l'expérience.

Personalized access

Reminder : all Masters (apart from Advanced Masters) are also accessible on file.

Admission and Enrolment Procedures for general registration

Specific procedures :

Pour les étudiants issus de tout autre programme que ceux repris dans les conditions d'admission, un dossier mentionnant les motivations et les crédits obtenus au cours des études précédentes est à soumettre à la commission d'admission de l'Ecole de pharmacie pour le 10 septembre au plus tard.

Supplementary classes

To enrol for this Masters, the student must have a good command of certain subjects. If this is not the case, they must add preparatory modules to their Master's programme.

● Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊖ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

○	Supplementary classes	N.		Credits	
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Règles professionnelles particulières

Teaching method

The teaching provided on the Master in Pharmacy programme is based on a variety of teaching methods enabling an integrated approach to the theory and practical aspects of the different disciplines relating to the professions of pharmacist and pharmaceutical researcher.

The theory classes are aimed at developing a specialised knowledge base in pharmacy using simple and complex practical examples of pharmaceutical problems. A number of compulsory and elective theory classes are also associated with a cross-functional activity integrating different disciplines by means of practical work in laboratories, seminars and case studies, during which the students become actively involved in their own learning.

Several teaching units invite the students to learn about pharmacy through individual or group work. The aim of such work is to develop skills in self-learning, summarising and communication. Another objective is to produce a thesis in which the students address, in a detailed and integrated manner, an original question related to one or more pharmaceutical fields, under the guidance of an expert in this area.

In the Research focus, the Master in Pharmacy teaching enables the students to work in a research laboratory or clinical pharmacy service, where they can discover the world of research through individual work based on experimentation and data analysis.

The training also includes a 6-month work placement in a dispensary, enabling the students to learn about the profession on their own and under the guidance of a pharmacist. An orientation placement, also compulsory, enables them to discover the other facets of the pharmacist's profession in society.

The theory-based and practical training involves pharmacy experts throughout the academic programme. This specialist supervision ensures a balance between the expected learning outcomes and current expectations of society in the field of pharmacy.

Evaluation

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".

Each course is subject to one or more evaluations, in the form of written and/or oral exams, organised in two main sessions: one in January and the other in June. The September session is a re-sit opportunity.

The specific details of the exam are communicated to the students at the start of each course. These evaluations are intended to assess the learning outcomes defined in the course objectives. With regard to the practical elements of the training (practicals, seminars and projects), the evaluation is ongoing and may include a final assessment. It places the emphasis on expertise in the fields of health science and pharmacy and on the students' ability to tackle a pharmaceutical problem using a scientific approach.

The evaluation of certain seminars and work is aimed at appraising the incorporation of the different pharmacy disciplines by the students. Finally, the Master's programme culminates in an integrated interdisciplinary oral exam in which the student has to analyse a prescription for one or more medications from various pharmaceutical perspectives (in particular: chemistry, galenics and pharmacology).

Mobility and/or Internationalisation outlook

Apart from studying for a whole year at another university (mainly Erasmus scheme) the option courses (all or some) or certain placements and/or research seminars may be replaced by a placement abroad (Erasmus scheme or similar).

The course on Health Economics and Pharmacoeconomics (2 credits) is a new course developed in partnership with KULeuven and is to be held partly at both sites.

The different option courses are accessible to bachelors in pharmacy from other Belgian or foreign as well as bachelors from other schools and faculties at UCL or other Belgian or foreign universities, subject to the agreement from the admission committee (celis@sfar.ucl.ac.be). The whole, or part of, the study programme for the Master in Pharmacy is open to foreign students under the Erasmus exchange scheme or other equivalents, subject to the agreement of the Erasmus coordinator (preat@farg.ucl.ac.be)

The Pharmacy School has ERASMUS agreements with the following universities :

Germany (Saarbrücken) ; Spain (Alcala de Henares, Madrid, Santiago de Compostela) ; France (Lille and Lyon) ; Greece (Patra) ; Italy (Bologna, Parma, Pisa) ; Netherlands (Utrecht) ; Portugal (Coimbra) ; United Kingdom (Bath).

Possible trainings at the end of the programme

Advanced Masters :

Advanced Master in Clinical Biology

Advanced Master in Industrial Pharmacy

Advanced Master in Hospital Pharmacy

Doctoral programmes :

Doctorate in pharmacy

Doctorate in biomedical sciences

Certificates

University Certificate in pharmacy

University Certificate in pharmaceutical engineering and industrial technology

University Certificate in clinical pharmacy

University Certificate in radiopharmacy

Contacts
