

FARM2M

2014 - 2015

Master [120] in Pharmacy

At Bruxelles Woluwe - 120 credits - 2 years - Day schedule - In french
 Dissertation/Graduation Project : **YES** - Internship : **optional**
 Activities in English: **NO** - Activities in other languages : **NO**
 Activities on other sites : **NO**
 Organized by: **Faculté de pharmacie et des sciences biomédicales (FASB)**
 Programme code: **farm2m** - European Qualifications Framework (EQF): 7

Table of contents

Introduction	2
Teaching profile	3
- Learning outcomes	3
- Programme structure	4
- Detailed programme	5
- Programme by subject	5
Information	17
- Admission	17
- Teaching method	20
- Evaluation	20
- Mobility and/or Internationalisation outlook	20
- Possible trainings at the end of the programme	20
- Certificates	21
- Contacts	21

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.

Whatever the focus or the options chosen, the programme of this master shall totalize 120 credits, spread over two years of studies each of 60 credits.

[> Core courses](#) [en-prog-2014-farm2m-wfarm200t.html]

Focuses

[> Finalité approfondie](#) [en-prog-2014-farm2m-wfarm200a]

[> Finalité spécialisée](#) [en-prog-2014-farm2m-wfarm201s]

Options courses

[> Option délivrance et suivi pharmaceutique](#) [en-prog-2014-farm2m-wfarm202o.html]

[> Option innovation et conception du médicament](#) [en-prog-2014-farm2m-wfarm203o.html]

[> Option production, contrôle et réglementation](#) [en-prog-2014-farm2m-wfarm204o.html]

[> Option biopharmacie et pharmacotoxicologie](#) [en-prog-2014-farm2m-wfarm205o.html]

[> Option recherches en sciences pharmaceutiques](#) [en-prog-2014-farm2m-wfarm206o.html]

FARM2M Detailed programme

Programme by subject

CORE COURSES [74.0]

○ Mandatory

△ Courses not taught during 2014-2015

⊕ Periodic courses taught during 2014-2015

⊗ Optional

⊖ Periodic courses not taught during 2014-2015

‡ Two years course

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	
○ WFARM2159	PHARMACEUTICAL TECHNOLOGY	Fabienne Danhier, Michel Deleers, Véronique Prétat (coord.), Rita Vanbever, Gaëlle Vandermeulen	60h+28h	10 Credits	1 + 2q	x	
○ WFARM2134	Gestion des situations aiguës	Eddy Bodart, Louis De Canniere, Dominique Vanpee (coord.)	15h	2 Credits	1q	x	
○ WFARM2115	Pharmacologie spéciale et éléments de pharmacothérapie	Chantal Dessy, Olivier Feron, Emmanuel Hermans, Jean-Christophe Jonas, Anne Spinewine, Françoise Van Bambeke (coord.)	85h	9 Credits	1 + 2q	x	
○ WFARM2236	Pharmacie et société	Catherine Druetz, Eric Gaziaux, Christian Léonard, Marie-Paule Mingeot (coord.), Luc Roegiers, Thierry Roisin	37.5h	4 Credits	1q		x
○ WFARM2239	Sémiologie	Stéphan Clément de Cléty, Chantal Lefebvre	30h	4 Credits	1q		x
○ WFARM2255	Stage en officine et séminaires de pratique professionnelle	Valérie Lacour	15h+30h	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	Arnaud Join-Lambert	15h	2 Credits	1q	x	
⊗ LTECO2103	Questions of religious sciences: questions about ethics	Eric Gaziaux	15h	2 Credits	1q	x	

LIST OF FOCUSES

Une finalité à choisir parmi les deux suivantes :

- > Finalité approfondie [en-prog-2014-farm2m-wfarm200a]
 > Finalité spécialisée [en-prog-2014-farm2m-wfarm201s]

FINALITÉ APPROFONDIE [30.0]

- Mandatory
 △ Courses not taught during 2014-2015
 ⊕ Periodic courses taught during 2014-2015
- ⊗ Optional
 ⊖ Periodic courses not taught during 2014-2015
 † Two years course

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		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, Véronique Prétat, Pierre Sonveaux, Françoise Van Bambeke	40h	4 Credits	1 + 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, Véronique Prétat, Pierre Sonveaux, Françoise Van Bambeke	20h+30h	8 Credits	1 + 2q	x	
○ WFARM2271	Travail expérimental de recherche en sciences pharmaceutiques (2e partie)	N.		13 Credits			x
○ WFARM2275	Exercice de communication scientifique	Pedro Buc Calderon, Anne des Rieux, Raphaël Frédéric, Bernard Gallez (coord.), Joëlle Leclercq, Marie-Paule Mingeot, Giulio Muccioli, Véronique Prétat, Pierre Sonveaux, Françoise Van Bambeke	10h+10h	2 Credits	1q		x

FINALITÉ SPÉCIALISÉE [30.0]

- Mandatory
 △ Courses not taught during 2014-2015
 ⊕ Periodic courses taught during 2014-2015
- ⊗ Optional
 ⊖ Periodic courses not taught during 2014-2015
 † Two years course

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

						Year	
						1	2
○ WFARM2111	Séminaire de pharmacothérapie intégrée (1re partie)	Chantal Dessy, Françoise Van Bambeke (coord.)	0h+15h	2 Credits	1 + 2q	x	

						Year	
						1	2
○ WFARM2135	Practical exercises integred of pharmaceutical sciences	Laure Elens, Raphaël Frédérick, Joëlle Leclercq (coord.), Giulio Muccioli, Véronique Préat	0h+195h	9 Credits	1 + 2q	x	
○ WFARM2196	Rational therapeutic choices (Introduction to evidence-based medicine and pharmacoconomy)	Bruno Krug, Anne Spinewine, Paul Tulkens	30h	4 Credits	1q	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)	Marie-Paule Mingeot		4 Credits			x
○ WFARM2235	PRACTICAL TRAINING IN PHARMACEUTICAL TECHNOLOGY	Fabienne Danhier, Véronique Préat	0h+120h	5 Credits	1q		x
○ WFARM2211	Séminaire de pharmacothérapie intégrée (2e partie)	Guy Beuken, Chantal Dessy, Olivier Feron, Emmanuel Hermans, Anne Spinewine, 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-2014-farm2m-wfarm202o]
- > Option innovation et conception du médicament [en-prog-2014-farm2m-wfarm203o]
- > Option production, contrôle et réglementation [en-prog-2014-farm2m-wfarm204o]
- > Option biopharmacie et pharmacotoxicologie [en-prog-2014-farm2m-wfarm205o]
- > Option recherches en sciences pharmaceutiques [en-prog-2014-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 2014-2015

⊕ Periodic courses taught during 2014-2015

⊗ Optional

⊖ Periodic courses not taught during 2014-2015

‡ Two years course

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)	Chantal Dessy, Emmanuel Hermans (coord.), Anne Spinewine, Françoise Van Bambeke	0h+40h	7 Credits	1q		x

o Cours au choix (6 crédits)

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 Préat), Joëlle Leclercq (coord.), Véronique Préat	30h+15h	3 Credits	2q	x	
WFARM2128	Processus de découverte, de développement et de mise sur le marché du médicament	Jean-Michel Dogné, Didier Lambert, Joëlle Leclercq, Paul Tulkens, 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	Lilianne Marot, Véronique Préat, Dominique Tennstedt (coord.)	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 Préat (coord.), Rita Vanbever, Gaëlle Vandermeulen	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	
WFARM2519	Produits issus des biotechnologies et vaccins	N.	20h+10h	3 Credits		x	
WFARM2521	Recherche translationnelle : de la dysfonction biologique à la validation de nouveaux traitements	Emmanuel Hermans, Didier Lambert, Marie-Paule Mingeot (coord.)	20h+10h	3 Credits	2q	x	
WFARM2517	Biomatériaux et ingénierie tissulaire	Anne des Rieux (coord.), Gaëtane Leloup	20h+10h	3 Credits	2q	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 2014-2015

⊕ Periodic courses taught during 2014-2015

⊗ Optional

⊖ Periodic courses not taught during 2014-2015

‡ Two years course

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

Year

1 2

○ Cours obligatoires (10 credits)

○ WFARM2128	Processus de découverte, de développement et de mise sur le marché du médicament	Jean-Michel Dogné, Didier Lambert, Joëlle Leclercq, Paul Tulkens, Françoise Van Bambeke (coord.)	30h+15h	3 Credits	2q	x	
○ WFARM2224	Pharmaceutical integration seminar (preclinical research)	Bernard Gallez, Emmanuel Hermans (coord.), Didier Lambert, Marie-Paule Mingeot, Giulio Muccioli	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 Préat), Joëlle Leclercq (coord.), Véronique Préat	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.), Marie-Paule Mingeot, Pierre Sonveaux	20h+10h	3 Credits	2q	x	
⊗ WFARM2519	Produits issus des biotechnologies et vaccins	N.	20h+10h	3 Credits			x
⊗ WFARM2521	Recherche translationnelle : de la dysfonction biologique à la validation de nouveaux traitements	Emmanuel Hermans, Didier Lambert, Marie-Paule Mingeot (coord.)	20h+10h	3 Credits	2q	x	
⊗ WFARM2517	Biomatériaux et ingénierie tissulaire	Anne des Rieux (coord.), Gaëtane Leloup	20h+10h	3 Credits	2q	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 2014-2015

⊕ Periodic courses taught during 2014-2015

⊗ Optional

⊖ Periodic courses not taught during 2014-2015

⊞ Two years course

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)	Raphaël Frédéric, Joëlle Leclercq (coord.), Véronique Prétat	0h+40h	7 Credits	1q		x
○ WFARM2104	GOOD MANUFACTURING AND GOOD LABORATORY PRACTICE	Catherine Delvenne (compensates Véronique Préat), Joëlle Leclercq (coord.), Véronique Prétat	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	Jean-Michel Dogné, Didier Lambert, Joëlle Leclercq, Paul Tulkens, 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 Prétat (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 Prétat (coord.), Rita Vanbever, Gaëlle Vandermeulen	20h+10h	3 Credits	2q		x
⊗ WFARM2516	Pharmacotechnie	Philippe Levêque	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 2014-2015

⊕ Periodic courses taught during 2014-2015

⊗ Optional

⊖ Periodic courses not taught during 2014-2015

‡ Two years course

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)	Pedro Buc Calderon (coord.), Olivier Feron, Philippe Hantson	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 Préat), Joëlle Leclercq (coord.), Véronique Préat	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	Jean-Michel Dogné, Didier Lambert, Joëlle Leclercq, Paul Tulkens, 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	Lilianne Marot, Véronique Préat, Dominique Tennstedt (coord.)	20h+10h	3 Credits	2q	x	
⊗ WFARM2506	Formes pharmaceutiques et biodisponibilité	Laure Elens, Véronique Préat (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 Préat (coord.), Rita Vanbever, Gaëlle Vandermeulen	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 Viikkula, Pierre Wallemacq	20h+10h	3 Credits	2q	x	

							Year	
							1	2
⌘ WFARM2515	Pharmacologie moléculaire	Olivier Feron, Emmanuel Hermans (coord.), 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	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 2014-2015

⊕ Periodic courses taught during 2014-2015

⊗ Optional

⊖ Periodic courses not taught during 2014-2015

‡ Two years course

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

Year

1 2

o Cours obligatoire (10 credits)

Course ID	Course Title	Instructor(s)	Hours	Credits	Year 1	Year 2
● WFARM2177	Biostatistics	Laure Elens	20h+10h	3 Credits	2q	x
● WFARM2238	Séminaire d'intégration pharmaceutique (recherche)	Pedro Buc Calderon, Anne des Rieux, Raphaël Frédéric, Bernard Gallez (coord.), Joëlle Leclercq, Marie-Paule Mingeot, Giulio Muccioli, Véronique Prét, Pierre Sonveaux, Françoise Van Bambeke	0h+40h	7 Credits	1q	x

o 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 V&ronique Pr&at), Joëlle Leclercq (coord.), Véronique Prét	30h+15h	3 Credits	2q	x
⊗ WFARM2111	Séminaire de pharmacothérapie intégrée (1re partie)	Chantal Dessy, Françoise Van Bambeke (coord.)	0h+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	Jean-Michel Dogné, Didier Lambert, Joëlle Leclercq, Paul Tulkens, 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
⊗ WFARM2211	Séminaire de pharmacothérapie intégrée (2e partie)	Guy Beuken, Chantal Dessy, Olivier Feron, Emmanuel Hermans, Anne Spinewine, 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

						Year	
						1	2
WFARM2503	Complements of pharmacognosy and of analysis of pharmacologically interesting natural substances.	Joëlle Leclercq	20h+10h	3 Credits	2q	x	
WFARM2504	DERMOPHARMACY	Liliane Marot, Véronique Préat, Dominique Tennstedt (coord.)	20h+10h	3 Credits	2q	x	
WFARM2506	Formes pharmaceutiques et biodisponibilité	Laure Elens, Véronique Préat (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 Préat (coord.), Rita Vanbever, Gaëlle Vandermeulen	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 Viikkula, Pierre Wallemacq	20h+10h	3 Credits	2q	x	
WFARM2515	Pharmacologie moléculaire	Olivier Feron, Emmanuel Hermans (coord.), Marie-Paule Mingeot, Pierre Sonveaux	20h+10h	3 Credits	2q	x	
WFARM2516	Pharmacotechnie	Philippe Levêque	20h+10h	3 Credits	2q Δ	x	
WFARM2519	Produits issus des biotechnologies et vaccins	N.	20h+10h	3 Credits		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	
WFARM2521	Recherche translationnelle : de la dysfonction biologique à la validation de nouveaux traitements	Emmanuel Hermans, Didier Lambert, Marie-Paule Mingeot (coord.)	20h+10h	3 Credits	2q	x	
WFARM2517	Biomatériaux et ingénierie tissulaire	Anne des Rieux (coord.), Gaëtane Leloup	20h+10h	3 Credits	2q	x	

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

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

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 [Valorisation des acquis de l'expérience](#)

It is possible to gain admission to all masters courses via the validation of professional experience procedure.

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.

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
