

FARM2M

2016 - 2017

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-2016-farm2m-wfarm200t.html]

Focuses

[> Finalité approfondie](#) [en-prog-2016-farm2m-wfarm200a]

[> Finalité spécialisée](#) [en-prog-2016-farm2m-wfarm201s]

Options courses

[> Option délivrance et suivi pharmaceutique](#) [en-prog-2016-farm2m-wfarm202o.html]

[> Option innovation et conception du médicament](#) [en-prog-2016-farm2m-wfarm203o.html]

[> Option production, contrôle et réglementation](#) [en-prog-2016-farm2m-wfarm204o.html]

[> Option biopharmacie et pharmacotoxicologie](#) [en-prog-2016-farm2m-wfarm205o.html]

[> Option recherches en sciences pharmaceutiques](#) [en-prog-2016-farm2m-wfarm206o.html]

FARM2M Detailed programme

Programme by subject

CORE COURSES [74.0]

- Mandatory
 △ Courses not taught during 2016-2017
 ⊕ Periodic courses taught during 2016-2017
 ✘ Optional
 ⊖ Periodic courses not taught during 2016-2017
 ■ 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	Joelle.Leclercq (coord.) Giulio.Muccioli	30h	3 Credits	1q	x	
○ WFARM2118	Chimie médicinale	Raphaël.Frederick Didier.Lambert Giulio.Muccioli (coord.)	30h	3 Credits	2q	x	
○ WFARM2139	Pharmacogenomics and toxicology	Laure.Bindels 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	Veronique.Preat	40h	5 Credits	1q	x	
○ WFARM2157	Pharmacie galénique 2e partie	Veronique.Preat (coord.) Rita.Vanbever	20h+28h	5 Credits	2q	x	
○ WFARM2114	Pharmacologie spéciale et éléments de pharmacothérapie 1re partie	Olivier.Feron Emmanuel.Hermans Jean-Christophe.Jonas Francoise.Vanbambeke (coord.)	30h	3 Credits	1q	x	
○ WFARM2116	Pharmacologie spéciale et éléments de pharmacothérapie 2e partie	Chantal.Dessy Olivier.Feron Francoise.Vanbambeke (coord.)	26h	3 Credits	2q	x	
○ WFARM2111	Séminaire de pharmacothérapie intégrée (1re partie)	Chantal.Dessy Olivier.Feron Emmanuel.Hermans Muriel.Rocour Anne.Spinewine Francoise.Vanbambeke (coord.)	30h+15h	5 Credits	1 + 2q	x	
○ WFARM2236	Pharmacie et société	Paulo.Rodrigues Catherine.Druez Christian.Leonard Marie-Paule.Mingeot (coord.) Luc.Roegiers Thierry.Roisin	37.5h	4 Credits	1q		x
○ WFARM2239	Sémiologie ■	Stephan.Clementdeclety Chantal.Lefebvre	30h	4 Credits	1q		x
○ WFARM2255	Soins pharmaceutiques en officine et stage ■	Valerie.Lacour	15h+40h	12 Credits			x
○ WFARM2209	Mémoire en sciences pharmaceutiques			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-2016-farm2m-wfarm200a]
 > Finalité spécialisée [en-prog-2016-farm2m-wfarm201s]

FINALITÉ APPROFONDIE [30.0]

- Mandatory
 Courses not taught during 2016-2017
 Periodic courses taught during 2016-2017
 Optional
 Periodic courses not taught during 2016-2017
 Activity with requisites

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

						Year	
						1	2
<input checked="" type="radio"/> WFARM2171	Travail expérimental de recherche en sciences pharmaceutiques (1re partie)			3 Credits	1q	x	
<input checked="" type="radio"/> WFARM2175	Etude critique d'un article de recherche en sciences pharmaceutiques	Olivia.Dalleur Anne.Desrieux Raphael.Frederick Bernard.Gallez (coord.) Joelle.Leclercq Marie-Paule.Mingeot Giulio.Muccioli Veronique.Preat Pierre.Sonveaux Francoise.Vanbambeke	40h	4 Credits	2q	x	
<input checked="" type="radio"/> WFARM2176	Présentation d'un travail de recherche en sciences pharmaceutiques	Olivia.Dalleur Anne.Desrieux Raphael.Frederick Bernard.Gallez (coord.) Joelle.Leclercq Marie-Paule.Mingeot Giulio.Muccioli Veronique.Preat Pierre.Sonveaux Francoise.Vanbambeke	20h+30h	8 Credits	2q	x	
<input checked="" type="radio"/> WFARM2271	Travail expérimental de recherche en sciences pharmaceutiques (2e partie) <input checked="" type="checkbox"/>			13 Credits	1q		x
<input checked="" type="radio"/> WFARM2275	Exercice de communication scientifique <input checked="" type="checkbox"/>	Olivia.Dalleur Anne.Desrieux Raphael.Frederick Bernard.Gallez (coord.) Joelle.Leclercq Marie-Paule.Mingeot Giulio.Muccioli Veronique.Preat Pierre.Sonveaux Francoise.Vanbambeke	10h+10h	2 Credits	1q		x

FINALITÉ SPÉCIALISÉE [30.0]

- Mandatory
 Courses not taught during 2016-2017
 Periodic courses taught during 2016-2017
 Optional
 Periodic courses not taught during 2016-2017
 Activity with requisites

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

						Year	
						1	2
<input checked="" type="radio"/> WFARM2135	Practical exercises integred of pharmaceutical sciences	Laure.Elens Raphael.Frederick Joelle.Leclercq (coord.) Giulio.Muccioli Veronique.Preat	0h+160h	9 Credits	1 + 2q	x	

						Year	
						1	2
○ WFARM2196	Rational therapeutic choices (Introduction to evidence-based medicine and pharmacoecconomy)	Severine.Henrard Anne.Spinewine (coord.)	30h+10h	4 Credits	1q	x	
○ WFARM2134	Gestion des situations aigües	Eddy.Bodart Caroline.Boulouffe Louis.Decanniere Dominique.Vanpee (coord.)	15h	2 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)			4 Credits	1q		x
○ WFARM2235	PRACTICAL TRAINING IN PHARMACEUTICAL TECHNOLOGY 🟡	Veronique.Preat	0h+120h	5 Credits	1q		x
○ WFARM2211	Séminaire de pharmacothérapie intégrée (2e partie) 🟡	Guy.Beuken Olivia.Dalleur Chantal.Dessy Olivier.Feron Emmanuel.Hermans Barbara.Reutemann SOMEBODY Francoise.Vanbambeke (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-2016-farm2m-wfarm202o]
- > Option innovation et conception du médicament [en-prog-2016-farm2m-wfarm203o]
- > Option production, contrôle et réglementation [en-prog-2016-farm2m-wfarm204o]
- > Option biopharmacie et pharmacotoxicologie [en-prog-2016-farm2m-wfarm205o]
- > Option recherches en sciences pharmaceutiques [en-prog-2016-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 2016-2017

⊕ Periodic courses taught during 2016-2017

⊗ Optional

⊖ Periodic courses not taught during 2016-2017

🟡 Activity with requisites

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

						Year	
						1	2
○ 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.Desrieux Olivier.Feron Bernard.Gallez Emmanuel.Hermans (coord.) Joelle.Leclercq Marie-Paule.Mingeot Giulio.Muccioli Rita.Vanbever	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	Joelle.Leclercq (coord.) Veronique.Preat	30h+15h	3 Credits	2q	x	
WFARM2128	Processus de découverte, de développement et de mise sur le marché du médicament	Laure.Bindels Raphael.Frederick Severine.Henrard Joelle.Leclercq Francoise.Vanbambeke (coord.)	30h+15h	3 Credits	2q	x	
WFARM2180	Organotoxicity : molecular, cellular and functional aspects	Olivier.Feron (coord.) Philippe.Hantson Philippe.Lysy Xavier.Wittebole	30h+15h	3 Credits	2q	x	
WFARM2504	DERMOPHARMACY	Marie.Baeck (coord.) Valerie.Dekeuleeneer Liliane.Marot Isabelle.Tromme	20h+10h	3 Credits	2q	x	
WFARM2507	Introduction to pharmaceutical management	Yannick.Biot	20h+10h	3 Credits	2q	x	
WFARM2509	Complementary medicines	Christophe.Chantrain Olivia.Dalleur (compensates Emmanuel Hermans) Emmanuel.Hermans Joelle.Leclercq (coord.) Anne.Spinewine	20h+10h	3 Credits	2q	x	
WFARM2510	Veterinary drugs	Jean-Paul.Dehoux Isabelle.Donnay Francoise.Vanbambeke (coord.)	20h+10h	3 Credits	2q	x	
WFARM2512	NEW DRUG DELIVERY SYSTEMS	Anne.Desrieux Veronique.Preat (coord.) Rita.Vanbever	20h+10h	3 Credits	2q	x	
WFARM2514	Pharmacodépendance et toxicomanie	Arnaud.Capron Philippe.Detimary Veronique.Godding Philippe.Hantson Vincent.Haufroid Emmanuel.Hermans (coord.) Denis.Jacques Didier.Lambert Peter.Starkel Miikka.Vikkula	20h+10h	3 Credits	2q	x	
WFARM2519	Produits issus des biotechnologies et vaccins		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 Veronique.Preat Pierre.Sonveaux (coord.)	20h+10h	3 Credits	2q	x	
WFARM2517	Biomatériaux et ingénierie tissulaire	Gaetane.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 2016-2017

⊕ Periodic courses taught during 2016-2017

⊗ Optional

⊖ Periodic courses not taught during 2016-2017

■ Activity with requisites

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	Laure.Bindels Raphael.Frederick Severine.Henrard Joelle.Leclercq Francoise.Vanbambeke (coord.)	30h+15h	3 Credits	2q	x	
○ WFARM2224	Pharmaceutical integration seminar (preclinical research) ■	Nathalie.Delzenne Anne.Desrieux Olivier.Feron Bernard.Gallez Emmanuel.Hermans (coord.) Joelle.Leclercq Marie-Paule.Mingeot Giulio.Muccioli 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	Joelle.Leclercq (coord.) Veronique.Preat	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	Raphael.Frederick Didier.Lambert Giulio.Muccioli (coord.)	20h+10h	3 Credits	2q	x	
⊗ WFARM2503	Complements of pharmacognosy and of analysis of pharmacologically interesting natural substances.	Joelle.Leclercq	20h+10h	3 Credits	2q	x	
⊗ WFARM2508	Isolation of Natural Products and Structural Analysis	Joelle.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		20h+10h	3 Credits	2q △	x	
⊗ WFARM2521	Recherche translationnelle : de la dysfonction biologique à la validation de nouveaux traitements	Emmanuel.Hermans Marie-Paule.Mingeot Veronique.Preat Pierre.Sonveaux (coord.)	20h+10h	3 Credits	2q	x	
⊗ WFARM2517	Biomatériaux et ingénierie tissulaire	Gaetane.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 2016-2017

⊕ Periodic courses taught during 2016-2017

⊗ Optional

⊖ Periodic courses not taught during 2016-2017

■ Activity with requisites

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

Year

1 2

o Cours obligatoires (10 credits)

○ WFARM2225	Pharmaceutical integration seminar (formulation, production and control) ■	Nathalie.Delzenne Anne.Desrieux Olivier.Feron Bernard.Gallez Emmanuel.Hermans (coord.) Joelle.Leclercq Marie-Paule.Mingeot Giulio.Muccioli Rita.Vanbever	0h+40h	7 Credits	1q		x
○ WFARM2104	GOOD MANUFACTURING AND GOOD LABORATORY PRACTICE	Joelle.Leclercq (coord.) Veronique.Preat	30h+15h	3 Credits	2q		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.

⊗ 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	Laure.Bindels Raphaël.Frederick Severine.Henrard Joelle.Leclercq Francoise.Vanbambeke (coord.)	30h+15h	3 Credits	2q		x
⊗ WFARM2180	Organotoxicity : molecular, cellular and functional aspects	Olivier.Feron (coord.) Philippe.Hantson Philippe.Lysy Xavier.Wittebole	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 Veronique.Preat (coord.)	20h+10h	3 Credits	2q		x
⊗ WFARM2508	Isolation of Natural Products and Structural Analysis	Joelle.Leclercq (coord.) Giulio.Muccioli	20h+10h	3 Credits	2q		x
⊗ WFARM2512	NEW DRUG DELIVERY SYSTEMS	Anne.Desrieux Veronique.Preat (coord.) Rita.Vanbever	20h+10h	3 Credits	2q		x
⊗ WFARM2516	Pharmacotechnie		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 2016-2017

⊕ Periodic courses taught during 2016-2017

⊗ Optional

⊖ Periodic courses not taught during 2016-2017

■ 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	Olivier.Feron (coord.) Philippe.Hantson Philippe.Lysy Xavier.Wittebole	30h+15h	3 Credits	2q	x	
○ WFARM2228	Seminar of pharmaceutical integration (pharmacokinetic, toxicology and clinical biology) ■	Nathalie.Delzenne Anne.Desrieux Olivier.Feron Bernard.Gallez Emmanuel.Hermans (coord.) Joelle.Leclercq Marie-Paule.Mingeot Giulio.Muccioli 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	Joelle.Leclercq (coord.) Veronique.Preat	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	Laure.Bindels Raphael.Frederick Severine.Henrard Joelle.Leclercq Francoise.Vanbambeke (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.) Valerie.Dekeuleneer Liliane.Marot Isabelle.Tromme	20h+10h	3 Credits	2q	x	
⊗ WFARM2506	Formes pharmaceutiques et biodisponibilité	Laure.Elens Veronique.Preat (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	Anne.Desrieux Veronique.Preat (coord.) Rita.Vanbever	20h+10h	3 Credits	2q	x	
⊗ WFARM2513	Pharmacocinétique approfondie	Laure.Elens	20h+10h	3 Credits	2q	x	
⊗ WFARM2514	Pharmacodépendance et toxicomanie	Arnaud.Capron Philippe.Detimary Veronique.Godding Philippe.Hantson Vincent.Haufroid Emmanuel.Hermans (coord.) Denis.Jacques Didier.Lambert Peter.Starkel Miikka.Vikkula	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	Gaetane.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 2016-2017

⊕ Periodic courses taught during 2016-2017

⊗ Optional

⊖ Periodic courses not taught during 2016-2017

■ Activity with requisites

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) ■	Nathalie.Delzenne Anne.Desrieux Olivier.Feron Bernard.Gallez Emmanuel.Hermans (coord.) Joelle.Leclercq Marie-Paule.Mingeot Giulio.Muccioli Rita.Vanbever	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 Barbara.Reutemann (compensates Olivia Dalleur)	15h+30h	4 Credits	2q	x
WFARM2104	GOOD MANUFACTURING AND GOOD LABORATORY PRACTICE	Joelle.Leclercq (coord.) Veronique.Preat	30h+15h	3 Credits	2q	x
WFARM2111	Séminaire de pharmacothérapie intégrée (1re partie)	Chantal.Dessy Olivier.Feron Emmanuel.Hermans Muriel.Rocour Anne.Spinewine Francoise.Vanbambeke (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	Laure.Bindels Raphael.Frederick Severine.Henrard Joelle.Leclercq Francoise.Vanbambeke (coord.)	30h+15h	3 Credits	2q	x
WFARM2180	Organotoxicity : molecular, cellular and functional aspects	Olivier.Feron (coord.) Philippe.Hantson Philippe.Lysy Xavier.Wittebole	30h+15h	3 Credits	2q	x
WFARM2211	Séminaire de pharmacothérapie intégrée (2e partie) ■	Guy.Beuken Olivia.Dalleur Chantal.Dessy Olivier.Feron Emmanuel.Hermans Barbara.Reutemann SOMEBODY Francoise.Vanbambeke (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

						Year	
						1	2
WFARM2501	Chimie pharmaceutique avancée et drug design	Raphael.Frederick 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.	Joelle.Leclercq	20h+10h	3 Credits	2q	x	
WFARM2504	DERMOPHARMACY	Marie.Baeck (coord.) Valerie.Dekeuleneer Liliane.Marot Isabelle.Tromme	20h+10h	3 Credits	2q	x	
WFARM2506	Formes pharmaceutiques et biodisponibilité	Laure.Elens Veronique.Preat (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	Joelle.Leclercq (coord.) Giulio.Muccioli	20h+10h	3 Credits	2q	x	
WFARM2509	Complementary medicines	Christophe.Chantrain Olivia.Dalleur (compensates Emmanuel.Hermans) Emmanuel.Hermans Joelle.Leclercq (coord.) Anne.Spinewine	20h+10h	3 Credits	2q	x	
WFARM2510	Veterinary drugs	Jean-Paul.Dehoux Isabelle.Donnay Francoise.Vanbambeke (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	Anne.Desrieux Veronique.Preat (coord.) Rita.Vanbever	20h+10h	3 Credits	2q	x	
WFARM2513	Pharmacocinétique approfondie	Laure.Elens	20h+10h	3 Credits	2q	x	
WFARM2514	Pharmacodépendance et toxicomanie	Arnaud.Capron Philippe.Detimary Veronique.Godding Philippe.Hantson Vincent.Haufroid Emmanuel.Hermans (coord.) Denis.Jacques Didier.Lambert Peter.Starkel Miikka.Vikkula	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		20h+10h	3 Credits	2q Δ	x	
WFARM2519	Produits issus des biotechnologies et vaccins		20h+10h	3 Credits	2q Δ	x	
WFARM2520	Principes et applications biophysique des méthodes de spectroscopie de résonance magnétique nucléaire et électronique	Bernard.Gallez Benedicte.Jordan (coord.)	20h+10h	3 Credits	2q	x	
WFARM2521	Recherche translationnelle : de la dysfonction biologique à la validation de nouveaux traitements	Emmanuel.Hermans Marie-Paule.Mingeot Veronique.Preat Pierre.Sonveaux (coord.)	20h+10h	3 Credits	2q	x	
WFARM2517	Biomatériaux et ingénierie tissulaire	Gaetane.Leloup	20h+10h	3 Credits	2q Δ	x	

Course prerequisites

A document entitled [en-prerequis-2016-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 [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.

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 2016-2017

⊕ Periodic courses taught during 2016-2017

⊗ Optional

⊖ Periodic courses not taught during 2016-2017

■ Activity with requisites

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

○	Supplementary classes			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

Curriculum Managment

Entite de la structure FARM

Acronyme	FARM
Dénomination	Ecole de pharmacie
Adresse	Avenue Mounier, 73 bte B1.73.03 1200 Woluwe-Saint-Lambert Tél 02 764 73 60
Secteur	Secteur des sciences de la santé (SSS)
Faculté	Faculté de pharmacie et des sciences biomédicales (FASB)
Commission de programme	Ecole de pharmacie (FARM)

Président de l'école de pharmacie : [Emmanuel Hermans](#)

Jury

Président du jury d'examens Master : [Emmanuel Hermans](#)

Secrétaire du jury d'examens Master : [Olivier Feron](#)

Usefull Contacts

Conseiller aux études :

Contact : [Josiane Toremans](#)

