

**FARM1BA**

2014 - 2015

Bachelor in Pharmacy

**At Bruxelles Woluwe - 180 credits - 3 years - Day schedule - In french**Dissertation/Graduation Project : **NO** - Internship : **NO**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: **farm1ba** - European Qualifications Framework (EQF): 6**Table of contents**

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## FARM1BA - Introduction

### Introduction

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## FARM1BA - Teaching profile

### Learning outcomes

Students enrolled on the the Bachelor in Pharmacy course are preparing for the training offered in the Master in Pharmacy programme, on completion of which they will achieve the title of pharmacist. The aim of the programme is therefore to help the students become medication specialists able to improve patient health.

The training in the first year of the Bachelor programme is based on an in-depth study of the basic sciences (chemistry, biology, physics, anatomy, etc.) used in the context of pharmacy.

In the second year, the pharmaceutical element increases significantly, in particular via the study of pharmacology, medicinal plants, and an introduction to analytical chemistry and the chemical synthesis of medications.

The final year of the Bachelor programme further reinforces the foundation in pharmacy and initiates students into a work environment (compulsory work placement in a field of the student's choice). The programme as a whole enables students to acquire a base of knowledge and expertise in the basic sciences, as well as specialist training in pharmacy.

During the three years of the Bachelor's course, by coming to a better understanding of the use of a medication and its effect on the body, the students will develop their training and professional projects, which they will pursue throughout the Master's programme, with increasing independence.

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

#### **1. Demonstrate pharmaceutical expertise: use a body of concepts and knowledge in pharmacy and health**

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

1b. Assimilate knowledge of chemistry, physicochemistry, biochemistry, pharmacognosy and pharmacology useful in the synthesis, design and analysis of medications.

1c. Incorporate knowledge of anatomy, physiology, immunology, microbiology, nutrition, pharmacology and pharmacokinetics, pathology, medical biology, semiology and psychology in order to understand the action of a medication on the body and plan its use.

#### **2. Scientific approach: resolve pharmaceutical problems by using their knowledge and critical thinking**

2a. Understand a defined pharmaceutical problem or issue.

2b. Display command of the relevant tools and sources of information related to the problem or issue concerned.

2c. Analyse, interpret and compare the information in a robust manner.

2d. Summarise the fundamental and necessary elements related to the problem or issue concerned.

2e. Implement an experiment protocol to formulate, produce and characterise a medication.

2f. Learn how to work in a team.

#### **3. Communication: communicate in an effective, robust and respectful manner from a professional perspective**

3a. Tailor the communication to obtain and provide clear, complete and accurate information (verbal and/or written) in accordance with the relevant standards, if necessary in another language.

3b. Use information and communication technologies appropriately.

#### **4. Sense of responsibility: act in an ethical and responsible manner**

4a. Observe the rules of safety and professional best practice in a scientific context.

4b. Adopt ethical values and comply with scientific and professional agreements.

4c. Understand and respect the limits of their remit.

4d. Conduct themselves as responsible actors in their areas of expertise.

#### **5. Quality: carry out self-assessment, supplement their knowledge and adapt their approach**

- 5a. Develop a self-assessment approach to define their training needs in order to respond to specific situations.  
 5b. Utilise the individual and collective training tools in a robust and independent manner.  
 5c. Adapt to a variety of learning situations and take advantage of them while managing stress.

## Programme structure

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## FARM1BA Detailed programme

## Programme by subject

Year

1 2 3

### o Majeure (150 credits)

#### o Des atomes, des molécules et des systèmes qui les régissent (67 credits)

o WMD1102	Physique expérimentale et introduction mathématique aux sciences expérimentales (1e partie)	Eduardo Cortina Gil, Bernard Piraux (coord.)	60h+21h	8 Credits	1q	x		
o WMD1104	Physique expérimentale et introduction mathématique aux sciences expérimentales (2e partie)	Michel Herquet (compensates Fabio Maltoni), Fabio Maltoni	30h+21h	5 Credits	2q	x		
o WMD1105	Chimie générale et minérale	Jacques Poupaert, Mark Rider	60h+30h	9 Credits	1q	x		
o WMD1106	ORGANIC CHEMISTRY	Mohamed Ayadim, Olivier Riant (coord.), Michael Singleton	60h+30h	9 Credits	2q	x		
o WFARM1003	Practicals of general and inorganic chemistry	Raphaël Frédérick	0h+30h	2 Credits	2q	x		
o WFARM1243	Introduction à la chimie analytique (Théorie)	Marie-France Herent, Giulio Muccioli (coord.)	30h	3 Credits	2q		x	
o WFARM1244	Travaux pratiques d'introduction à la chimie analytique	Marie-France Herent, Giulio Muccioli (coord.)	0h+105h	3 Credits	2q		x	
o WFARM1231	Organical chemistry Part 2	Mohamed Ayadim, Raphaël Frédérick (coord.)	45h+120h	10 Credits	1 + 2q		x	
o WFARM1221	Biochemistry and molecular biology	Nathalie Delzenne (coord.), Frédéric Lemaigre, Marie-Paule Mingeot	75h +37.5h	10 Credits	1q		x	
o WFARM1312	Analyse instrumentale (Théorie)	Marie-France Herent, Giulio Muccioli (coord.)	30h	3 Credits	1q			x
o WFARM1313	Travaux pratiques d'analyse instrumentale	Marie-France Herent, Giulio Muccioli (coord.)	0h+105h	3 Credits	1q			x
o WFARM1382	Molecular genetics and drugs	Etienne De Plaen, Jean-Noël Octave (coord.)	30h	2 Credits	1q			x

## o De la cellule végétale à la cellule animale, des tissus à l'être humain (40 credits)

o WMD1120P	Biologie générale et approche expérimentale de la biologie (partim biologie générale)	Jean Baptiste Demoulin, Pascal Kienlen-Campard, Marie-Christine Many	65h+25h	9 Credits	1q	x		
o WMD1006	Cytology and general histology	Jean-François Deneff, Anne-Catherine Gérard, Marie-Christine Many (coord.)	10h+40h	5 Credits	2q	x		
o WFARM1009	Elements of general and functional anatomy	Catherine Behets Wydemans (coord.), Christine Galant, Jean Rubay	30h	3 Credits	2q	x		
o WFARM1212	Eléments de physiologie générale	Olivier Feron	15h+7.5h	2 Credits	1q		x	
o WFARM1213	Human physiology and basics of physiopathology	Olivier Feron, Emmanuel Hermans, Jean-Christophe Jonas	60h	6 Credits	2q		x	
o WFARM1282	General microbiology	Thomas Michiels	20h+15h	3 Credits	1q		x	
o WFARM1305	Elements of General Pathology	Olivier Feron, Stéphane Moniotte (coord.)	30h	3 Credits	2q			x
o WFARM1306	Medical microbiology	Michel Delmée (coord.), Patrick Goubau, Jean Ruelle	45h	4 Credits	2q			x
o WSBIM1334F	Immunologie générale (partim FARM)	N.	35h	3 Credits	1q			x
o WFARM1303	Clinical Chemistry	Jean-Philippe Defour, Catherine Fillee, Teresinha Leal, Marianne Philippe, Marie-Françoise Vincent, Pierre Wallemacq (coord.)	20h	2 Credits	2q			x

## o Du médicament (37 credits)

o WFARM1004	The molecular aspect of drugs	Mohamed Ayadim, Raphaël Frédérick (coord.), Jacques Poupaert	15h+15h	2 Credits	2q	x		
o WFARM1008	Design of the drug	Olivia Dalleur, Véronique Prétat (coord.), Françoise Van Bambeke	15h+15h	2 Credits	2q	x		
o WFARM1232	General Pharmacology	Emmanuel Hermans	15h+7.5h	2 Credits	1q		x	
o WFARM1233	Botanical introduction to pharmacognosy	François Chaumont, Stephan Declerck, Joëlle Leclercq, Renate Wesselingh	45h+30h	6 Credits	1 + 2q		x	
o WFARM1302	Pharmaceutical organic chemistry	Raphaël Frédérick (coord.), Didier Lambert	45h+30h	6 Credits	1 + 2q			x
o WFARM1307	Physical pharmacy	Rita Vanbever	15h	2 Credits	1q			x
o WFARM1332	Pharmacologie générale, 2e partie	Chantal Dessy, Marie-Paule Mingeot	30h	4 Credits	1q			x
o WFARM1304	Pharmacognosy : a) phytochemistry - b) medicinal plants	Joëlle Leclercq	45h+30h	6 Credits	1 + 2q			x
o WFARM1300	Pharmacocinétique et métabolisme des xénobiotiques	Nathalie Delzenne, Laure Elens	30h+30h	4 Credits	1q			x
o WFARM1310	Inorganic drugs with use diagnosis and therapeutic	Bernard Gallez	30h	3 Credits	2q			x

## o L'homme et la société, l'individu dans le monde professionnel (6 credits)

o WFARM1160	Philosophy	Mylene Botbol	30h	3 Credits	1q	x		
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						Year		
						1	2	3
○ LANGL1854	Medical English	Timothy Byrne, Carlo Lefevre (coord.), Nevin Serbest, Shaïma Wasfy (compensates Timothy Byrne)	30h	3 Credits	2q	x		

### ○ Mineure (30 credits)

En complément de la majeure, l'étudiant a le choix entre (1) la mineure d'approfondissement en sciences pharmaceutiques, (2) la mineure d'approfondissement en sciences pharmaceutiques -recherche-, (3) une mineure d'ouverture proposée par d'autres programmes, à raison de 15 crédits en BAC2 et 15 crédits en BAC3.

### ⌘ Additional module in Pharmacy (30 credits)

#### ○ En deuxième année de bachelier

L'étudiant est tenu de suivre les cours suivants

○ LANGL1855	Medical English	Timothy Byrne (coord.), Sandrine Jacob (coord.)	30h	3 Credits	2q		x	
○ WFARM1219	Biophysics applied to the drugs	Bernard Gallez (coord.), Marie-Paule Mingeot	30h+15h	3 Credits	1q		x	
○ WFARM1247	Traitement statistique des données	Catherine Legrand	15h+15h	3 Credits	2q		x	
○ WFARM1239	Computerized workshop and research on scientific information related to drugs.	Patrice Cani	5h+10h	2 Credits	1q		x	
○ WMD1200T	Eléments d'épidémiologie (théorie)	N.	20h	2 Credits	2q		x	
○ WMDS1213G	Psychologie générale et médicale (partim psychologie générale)	N.	15h	2 Credits	1q		x	

#### ○ En troisième année de bachelier

Dans le cadre de la mineure d'approfondissement en sciences pharmaceutiques, l'étudiant est tenu de choisir l'une des deux possibilités suivantes. Un transfert vers le programme de la mineure d'approfondissement en sciences pharmaceutiques - recherche est toutefois possible.

#### ⌘ Poursuite de l'approfondissement (15 credits)

○ WFARM1309	Introduction to the pharmaceutical world, including internships	Valérie Lacour, Marie-Paule Mingeot (coord.), Rita Vanbever, Pierre Wallemacq	7.5h	5 Credits	2q			x
○ WFARM1349	Integrated Seminar in Pharmaceutical Sciences	Nathalie Delzenne, Emmanuel Hermans (coord.), Didier Lambert, Marie-Paule Mingeot, Jacques Poupaert	0h+45h	4 Credits	2q			x

#### ○ Cours au choix de l'approfondissement FARM (6 credits)

L'étudiant choisit des cours dans la liste ci-dessous pour une valeur de 6 crédits. Ces cours spécifiques de la filière en sciences pharmaceutiques permet à l'étudiant d'approfondir ses acquis dans divers domaines relatifs entre autres au développement, à l'analyse et à la pharmacocinétique des médicaments d'origine synthétique ou naturelle.

⌘ WFARM1319	Pharmacognosy, case studies	Joëlle Leclercq	15h	2 Credits	2q			x
⌘ WFARM1329	Advanced instrumental analysis	Marie-France Herent, Giulio Muccioli (coord.)	0h+30h	2 Credits	2q			x
⌘ WFARM1339	Compléments de pharmacocinétique	Laure Elens	15h	2 Credits	2q			x
⌘ WFARM1359	Drug design en chimie pharmaceutique	Raphaël Frédéric (coord.), Didier Lambert	15h	2 Credits	2q			x
⌘ WFARM1369	Evaluation de la biodistribution et de l'effet d'un médicament par des méthodes non invasives	Bernard Gallez	15h	2 Credits	2q			x
⌘ WFARM1379	Seminars of Clinical Chemistry	Jean-Philippe Defour, Catherine Fillee, Damien Gruson, Vincent Haufroid, Teresinha Leal, Marianne Philippe, Marie-Françoise Vincent, Pierre Wallemacq (coord.)	0h+30h	2 Credits	2q			x

						Year		
						1	2	3
⌘	WFARM1370	Formation à la communication scientifique	Timothy Byrne (coord.), Olivia Dalleur	15h+30h	4 Credits	2q		x

#### ⌘ Formation minimale à l'étranger (15 crédits)

L'étudiant qui réalise une partie de son parcours à l'étranger (de l'ordre de 30 crédits) pourra intégrer une partie de ce parcours dans son programme, en lieu et place des 15 crédits de sa mineure d'approfondissement en sciences pharmaceutiques.

○	WFARM1399	Formation minimale à l'étranger (ERASMUS)	N.		15 Credits			x
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### ⌘ Approfondissement en sciences pharmaceutiques - recherche (30 credits)

#### ○ Deuxième année de bachelier (15 credits)

##### ○ Cours obligatoires

L'étudiant est tenu de suivre les cours suivants.

○	LANGL1855	Medical English	Timothy Byrne (coord.), Sandrine Jacob (coord.)	30h	3 Credits	2q		x
○	WFARM1219	Biophysics applied to the drugs	Bernard Gallez (coord.), Marie-Paule Mingeot	30h+15h	3 Credits	1q		x
○	WFARM1247	Traitement statistique des données	Catherine Legrand	15h+15h	3 Credits	2q		x
○	WFARM1239	Computerized workshop and research on scientific information related to drugs.	Patrice Cani	5h+10h	2 Credits	1q		x
○	WMD1200T	Éléments d'épidémiologie (théorie)	N.	20h	2 Credits	2q		x
○	WMDS1213G	Psychologie générale et médicale (partim psychologie générale)	N.	15h	2 Credits	1q		x

#### ○ Troisième année de bachelier (15 credits)

Dans le cadre de la mineure d'approfondissement en sciences pharmaceutiques - recherche, l'étudiant est tenu de choisir l'une des deux possibilités suivantes. Un transfert vers le programme de la mineure d'approfondissement en sciences pharmaceutiques est toutefois possible.

○	WFARM1380	Introduction à la recherche pharmaceutique y compris stage	N.		7 Credits			x
○	WFARM1311	Projet expérimental personnel	N.		8 Credits			x

#### ⌘ Formation minimale à l'étranger (15 crédits)

L'étudiant qui réalise une partie de son parcours à l'étranger (de l'ordre de 30 crédits) pourra intégrer une partie de ce parcours dans son programme, en lieu et place des 15 crédits de sa mineure d'approfondissement en sciences pharmaceutiques.

○	WFARM1399	Formation minimale à l'étranger (ERASMUS)	N.		15 Credits			x
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### ⌘ Mineure d'ouverture (30 credits)

○		Mineure d'ouverture Voir la liste ci-dessous.	N.		15 Credits			x
○		Mineure d'ouverture L'étudiant poursuit la mineure d'ouverture choisie en 2e année dans la liste ci-dessous.	N.		15 Credits			x

## List of available minors

During the bachelor's of Pharmaceutical Sciences, the student has the opportunity to further his knowledge in the various pharmaceutical domains, by selecting in-depth study options.

Instead of these options, the bachelor's programme may likewise include an option of a " minor ", which will enable the student to open up new horizons. Minors in the following subjects : Biology, Chemistry, Law, Economics, Human Nutrition, Clinical Biomedical Sciences, Statistics, etc., may be envisaged, subject to the approval of the Teaching Committee of the School of Pharmacy.

- > **Additional module in Pharmacy** [ <https://www.uclouvain.be/en-prog-2014-app-wfarm100p> ]
- > **Approfondissement en sciences pharmaceutiques - recherche** [ <https://www.uclouvain.be/en-prog-2014-app-wfarr100p> ]
- > **Mineure en Antiquité : Égypte, Orient, Grèce, Rome** [ <https://www.uclouvain.be/en-prog-2014-min-lanti100i> ]
- > **Mineure en droit (accès)** [ <https://www.uclouvain.be/en-prog-2014-min-ladrt100i> ]
- > **Mineure en droit (ouverture)** [ <https://www.uclouvain.be/en-prog-2014-min-lodrt100i> ]
- > **Mineure en sciences biomédicales (ouverture)** [ <https://www.uclouvain.be/en-prog-2014-min-wsbim100i> ]
- > **Minor in Chinese studies** [ <https://www.uclouvain.be/en-prog-2014-min-lchin100i> ]
- > **Minor in Culture and Creation** [ <https://www.uclouvain.be/en-prog-2014-min-lcucr100i> ]
- > **Minor in Development and Environment** [ <https://www.uclouvain.be/en-prog-2014-min-ldenv100i> ]
- > **Minor in Economics** [ <https://www.uclouvain.be/en-prog-2014-min-lecon100i> ]
- > **Minor in Economics (open)** [ <https://www.uclouvain.be/en-prog-2014-min-loeco100i> ]
- > **Minor in Education (\*)** [ <https://www.uclouvain.be/en-prog-2014-min-lfopa100i> ]
- > **Minor in European Studies** [ <https://www.uclouvain.be/en-prog-2014-min-leuro100i> ]
- > **Minor in French Studies (\*)** [ <https://www.uclouvain.be/en-prog-2014-min-lfran100i> ]
- > **Minor in Gender Studies** [ <https://www.uclouvain.be/en-prog-2014-min-lgenr100i> ]
- > **Minor in Geography (\*)** [ <https://www.uclouvain.be/en-prog-2014-min-lgeog100i> ]
- > **Minor in History** [ <https://www.uclouvain.be/en-prog-2014-min-lhist100i> ]
- > **Minor in History of Art and Archeology** [ <https://www.uclouvain.be/en-prog-2014-min-larke100i> ]
- > **Minor in Human and Social Sciences** [ <https://www.uclouvain.be/en-prog-2014-min-lhuso100i> ]
- > **Minor in Information and Communication (\*)** [ <https://www.uclouvain.be/en-prog-2014-min-lcomu100i> ]
- > **Minor in Linguistics** [ <https://www.uclouvain.be/en-prog-2014-min-ling100i> ]
- > **Minor in Literary Studies** [ <https://www.uclouvain.be/en-prog-2014-min-llitt100i> ]
- > **Minor in Management (basic knowledge)** [ <https://www.uclouvain.be/en-prog-2014-min-lgesa100i> ]
- > **Minor in Medieval Studies** [ <https://www.uclouvain.be/en-prog-2014-min-lmedi100i> ]
- > **Minor in Musicology** [ <https://www.uclouvain.be/en-prog-2014-min-lmusi100i> ]
- > **Minor in Oriental Studies** [ <https://www.uclouvain.be/en-prog-2014-min-lori100i> ]
- > **Minor in Philosophy** [ <https://www.uclouvain.be/en-prog-2014-min-lisp100i> ]
- > **Minor in Political Sciences** [ <https://www.uclouvain.be/en-prog-2014-min-lspol100i> ]
- > **Minor in Population and Development Studies** [ <https://www.uclouvain.be/en-prog-2014-min-lsped100i> ]
- > **Minor in Psychology and Education (\*)** [ <https://www.uclouvain.be/en-prog-2014-min-lpsp100i> ]
- > **Minor in Scientific Culture** [ <https://www.uclouvain.be/en-prog-2014-min-lcusc100i> ]
- > **Minor in Sociology and Anthropology** [ <https://www.uclouvain.be/en-prog-2014-min-lsoca100i> ]
- > **Minor in Statistics** [ <https://www.uclouvain.be/en-prog-2014-min-lstat100i> ]
- > **Minor in Theology** [ <https://www.uclouvain.be/en-prog-2014-min-ltheo100i> ]

(\*) *This program is the subject of access criteria*



## Programme type

### FARM1BA - 1ST ANNUAL UNIT

○ 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...)

#### o Majeure

##### o Des atomes, des molécules et des systèmes qui les régissent

○ WMD1102	Physique expérimentale et introduction mathématique aux sciences expérimentales (1e partie)	Eduardo Cortina Gil, Bernard Piraux (coord.)	60h+21h	8 Credits	1q
○ WMD1104	Physique expérimentale et introduction mathématique aux sciences expérimentales (2e partie)	Michel Herquet (compensates Fabio Maltoni), Fabio Maltoni	30h+21h	5 Credits	2q
○ WMD1105	Chimie générale et minérale	Jacques Poupaert, Mark Rider	60h+30h	9 Credits	1q
○ WMD1106	ORGANIC CHEMISTRY	Mohamed Ayadim, Olivier Riant (coord.), Michael Singleton	60h+30h	9 Credits	2q
○ WFARM1003	Practicals of general and inorganic chemistry	Raphaël Frédéric	0h+30h	2 Credits	2q

##### o De la cellule végétale à la cellule animale, des tissus à l'être humain

○ WMD1120P	Biologie générale et approche expérimentale de la biologie (partim biologie générale)	Jean Baptiste Demoulin, Pascal Kienlen-Campard, Marie-Christine Many	65h+25h	9 Credits	1q
○ WMD1006	Cytology and general histology	Jean-François Denef, Anne-Catherine Gérard, Marie-Christine Many (coord.)	10h+40h	5 Credits	2q
○ WFARM1009	Elements of general and functional anatomy	Catherine Behets Wydemans (coord.), Christine Galant, Jean Rubay	30h	3 Credits	2q

##### o Du médicament

○ WFARM1004	The molecular aspect of drugs	Mohamed Ayadim, Raphaël Frédéric (coord.), Jacques Poupaert	15h+15h	2 Credits	2q
○ WFARM1008	Design of the drug	Olivia Dalleur, Véronique Préat (coord.), Françoise Van Bambeke	15h+15h	2 Credits	2q

##### o L'homme et la société, l'individu dans le monde professionnel

○ WFARM1160	Philosophy	Mylene Botbol	30h	3 Credits	1q
○ LANGL1854	Medical English	Timothy Byrne, Carlo Lefevre (coord.), Nevin Serbest, Shaima Wasfy (compensates Timothy Byrne)	30h	3 Credits	2q

**FARM1BA - 2ND ANNUAL UNIT**

○ 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...)

**○ Majeure****○ Des atomes, des molécules et des systèmes qui les régissent**

○ WFARM1243	<a href="#">Introduction à la chimie analytique (Théorie)</a>	Marie-France Herent, Giulio Muccioli (coord.)	30h	3 Credits	2q
○ WFARM1244	<a href="#">Travaux pratiques d'introduction à la chimie analytique</a>	Marie-France Herent, Giulio Muccioli (coord.)	0h+105h	3 Credits	2q
○ WFARM1231	<a href="#">Organical chemistry Part 2</a>	Mohamed Ayadim, Raphaël Frédérick (coord.)	45h+120h	10 Credits	1 + 2q
○ WFARM1221	<a href="#">Biochemistry and molecular biology</a>	Nathalie Delzenne (coord.), Frédéric Lemaigre, Marie-Paule Mingeot	75h +37.5h	10 Credits	1q

**○ De la cellule végétale à la cellule animale, des tissus à l'être humain**

○ WFARM1212	<a href="#">Éléments de physiologie générale</a>	Olivier Feron	15h+7.5h	2 Credits	1q
○ WFARM1213	<a href="#">Human physiology and basics of physiopathology</a>	Olivier Feron, Emmanuel Hermans, Jean-Christophe Jonas	60h	6 Credits	2q
○ WFARM1282	<a href="#">General microbiology</a>	Thomas Michiels	20h+15h	3 Credits	1q

**○ Du médicament**

○ WFARM1232	<a href="#">General Pharmacology</a>	Emmanuel Hermans	15h+7.5h	2 Credits	1q
○ WFARM1233	<a href="#">Botanical introduction to pharmacognosy</a>	François Chaumont, Stephan Declerck, Joëlle Leclercq, Renate Wesselingh	45h+30h	6 Credits	1 + 2q

**○ Mineure**

En complément de la majeure, l'étudiant a le choix entre (1) la mineure d'approfondissement en sciences pharmaceutiques, (2) la mineure d'approfondissement en sciences pharmaceutiques -recherche-, (3) une mineure d'ouverture proposée par d'autres programmes, à raison de 15 crédits en BAC2 et 15 crédits en BAC3.

**⊗ Additional module in Pharmacy****○ En deuxième année de bachelier**

L'étudiant est tenu de suivre les cours suivants

○ LANGL1855	<a href="#">Medical English</a>	Timothy Byrne (coord.), Sandrine Jacob (coord.)	30h	3 Credits	2q
○ WFARM1219	<a href="#">Biophysics applied to the drugs</a>	Bernard Gallez (coord.), Marie-Paule Mingeot	30h+15h	3 Credits	1q
○ WFARM1247	<a href="#">Traitement statistique des données</a>	Catherine Legrand	15h+15h	3 Credits	2q
○ WFARM1239	<a href="#">Computerized workshop and research on scientific information related to drugs.</a>	Patrice Cani	5h+10h	2 Credits	1q
○ WMD1200T	<a href="#">Éléments d'épidémiologie (théorie)</a>	N.	20h	2 Credits	2q
○ WMDS1213G	<a href="#">Psychologie générale et médicale (partim psychologie générale)</a>	N.	15h	2 Credits	1q

**⊗ Approfondissement en sciences pharmaceutiques - recherche****○ Deuxième année de bachelier**

**○ Cours obligatoires***L'étudiant est tenu de suivre les cours suivants.*

○ LANGL1855	Medical English	Timothy Byrne (coord.), Sandrine Jacob (coord.)	30h	3 Credits	2q
○ WFARM1219	Biophysics applied to the drugs	Bernard Gallez (coord.), Marie-Paule Mingeot	30h+15h	3 Credits	1q
○ WFARM1247	Traitement statistique des données	Catherine Legrand	15h+15h	3 Credits	2q
○ WFARM1239	Computerized workshop and research on scientific information related to drugs.	Patrice Cani	5h+10h	2 Credits	1q
○ WMD1200T	Eléments d'épidémiologie (théorie)	N.	20h	2 Credits	2q
○ WMDS1213G	Psychologie générale et médicale (partim psychologie générale)	N.	15h	2 Credits	1q

**⊗ Mineure d'ouverture**

○	Mineure d'ouverture <i>Voir la liste ci-dessous.</i>	N.		15 Credits	
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**FARM1BA - 3RD ANNUAL UNIT**

○ 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...)

**○ Majeure****○ Des atomes, des molécules et des systèmes qui les régissent**

○ WFARM1312	Analyse instrumentale (Théorie)	Marie-France Herent, Giulio Muccioli (coord.)	30h	3 Credits	1q
○ WFARM1313	Travaux pratiques d'analyse instrumentale	Marie-France Herent, Giulio Muccioli (coord.)	0h+105h	3 Credits	1q
○ WFARM1382	Molecular genetics and drugs	Etienne De Plaen, Jean-Noël Octave (coord.)	30h	2 Credits	1q

**○ De la cellule végétale à la cellule animale, des tissus à l'être humain**

○ WFARM1305	Elements of General Pathology	Olivier Feron, Stéphane Moniotte (coord.)	30h	3 Credits	2q
○ WFARM1306	Medical microbiology	Michel Delmée (coord.), Patrick Goubau, Jean Ruelle	45h	4 Credits	2q
○ WSBIM1334F	Immunologie générale (partim FARM)	N.	35h	3 Credits	1q
○ WFARM1303	Clinical Chemistry	Jean-Philippe Defour, Catherine Fillee, Teresinha Leal, Marianne Philippe, Marie-Françoise Vincent, Pierre Wallemacq (coord.)	20h	2 Credits	2q

**○ Du médicament**

○ WFARM1302	Pharmaceutical organic chemistry	Raphaël Frédéric (coord.), Didier Lambert	45h+30h	6 Credits	1 + 2q
○ WFARM1307	Physical pharmacy	Rita Vanbever	15h	2 Credits	1q
○ WFARM1332	Pharmacologie générale, 2e partie	Chantal Dessy, Marie-Paule Mingot	30h	4 Credits	1q
○ WFARM1304	Pharmacognosy : a) phytochemistry - b) medicinal plants	Joëlle Leclercq	45h+30h	6 Credits	1 + 2q
○ WFARM1300	Pharmacocinétique et métabolisme des xénobiotiques	Nathalie Delzenne, Laure Elens	30h+30h	4 Credits	1q
○ WFARM1310	Inorganic drugs with use diagnosis and therapeutic	Bernard Gallez	30h	3 Credits	2q

**○ Mineure**

En complément de la majeure, l'étudiant a le choix entre (1) la mineure d'approfondissement en sciences pharmaceutiques, (2) la mineure d'approfondissement en sciences pharmaceutiques -recherche-, (3) une mineure d'ouverture proposée par d'autres programmes, à raison de 15 crédits en BAC2 et 15 crédits en BAC3.

**⊗ Additionnal module in Pharmacy****○ En troisième année de bachelier**

Dans le cadre de la mineure d'approfondissement en sciences pharmaceutiques, l'étudiant est tenu de choisir l'une des deux possibilités suivantes. Un transfert vers le programme de la mineure d'approfondissement en sciences pharmaceutiques - recherche est toutefois possible.

**⊗ Poursuite de l'approfondissement**

○ WFARM1309	Introduction to the pharmaceutical world, including internships	Valérie Lacour, Marie-Paule Mingeot (coord.), Rita Vanbever, Pierre Wallemacq	7.5h	5 Credits	2q
○ WFARM1349	Integrated Seminar in Pharmaceutical Sciences	Nathalie Delzenne, Emmanuel Hermans (coord.), Didier Lambert, Marie-Paule Mingeot, Jacques Poupaert	0h+45h	4 Credits	2q

### ○ Cours au choix de l'approfondissement FARM

L'étudiant choisit des cours dans la liste ci-dessous pour une valeur de 6 crédits. Ces cours spécifiques de la filière en sciences pharmaceutiques permet à l'étudiant d'approfondir ses acquis dans divers domaines relatifs entre autres au développement, à l'analyse et à la pharmacocinétique des médicaments d'origine synthétique ou naturelle.

⊗ WFARM1319	Pharmacognosy, case studies	Joëlle Leclercq	15h	2 Credits	2q
⊗ WFARM1329	Advanced instrumental analysis	Marie-France Herent, Giulio Muccioli (coord.)	0h+30h	2 Credits	2q
⊗ WFARM1339	Compléments de pharmacocinétique	Laure Elens	15h	2 Credits	2q
⊗ WFARM1359	Drug design en chimie pharmaceutique	Raphaël Frédéric (coord.), Didier Lambert	15h	2 Credits	2q
⊗ WFARM1369	Evaluation de la biodistribution et de l'effet d'un médicament par des méthodes non invasives	Bernard Gallez	15h	2 Credits	2q
⊗ WFARM1379	Seminars of Clinical Chemistry	Jean-Philippe Defour, Catherine Fillee, Damien Gruson, Vincent Haufroid, Teresinha Leal, Marianne Philippe, Marie-Françoise Vincent, Pierre Wallemacq (coord.)	0h+30h	2 Credits	2q
⊗ WFARM1370	Formation à la communication scientifique	Timothy Byrne (coord.), Olivia Dalleur	15h+30h	4 Credits	2q

### ⊗ Formation minimale à l'étranger

L'étudiant qui réalise une partie de son parcours à l'étranger (de l'ordre de 30 crédits) pourra intégrer une partie de ce parcours dans son programme, en lieu et place des 15 crédits de sa mineure d'approfondissement en sciences pharmaceutiques.

○ WFARM1399	Formation minimale à l'étranger (ERASMUS)	N.		15 Credits	
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### ⊗ Approfondissement en sciences pharmaceutiques - recherche

#### ○ Troisième année de bachelier

Dans le cadre de la mineure d'approfondissement en sciences pharmaceutiques - recherche, l'étudiant est tenu de choisir l'une des deux possibilités suivantes. Un transfert vers le programme de la mineure d'approfondissement en sciences pharmaceutiques est toutefois possible.

○ WFARM1380	Introduction à la recherche pharmaceutique y compris stage	N.		7 Credits	
○ WFARM1311	Projet expérimental personnel	N.		8 Credits	

#### ⊗ Formation minimale à l'étranger

L'étudiant qui réalise une partie de son parcours à l'étranger (de l'ordre de 30 crédits) pourra intégrer une partie de ce parcours dans son programme, en lieu et place des 15 crédits de sa mineure d'approfondissement en sciences pharmaceutiques.

○ WFARM1399	Formation minimale à l'étranger (ERASMUS)	N.		15 Credits	
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### ⊗ Mineure d'ouverture

○	Mineure d'ouverture L'étudiant poursuit la mineure d'ouverture choisie en 2e année dans la liste ci-dessous.	N.		15 Credits	
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## FARM1BA - Information

### Admission

Decree of 7 November 2013 defining the landscape of higher education and the academic organization of studies.  
The admission requirements must be met prior to enrolment in the University.

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

- > [General requirements](#)
- > [Specific requirements](#)
- > [Knowledge of the French language exam](#)
- > [Special requirements](#)

### General requirements

Except as otherwise provided by other specific legal provisions, admission to undergraduate courses leading to the award of a Bachelor's degree will be granted to students with one of the following qualifications :

1. A Certificate of Upper Secondary Education issued during or after the 1993-1994 academic year by an establishment offering full-time secondary education or an adult education centre in the French Community of Belgium and, as the case may be, approved if it was issued by an educational institution before 1 January 2008 or affixed with the seal of the French Community if it was issued after this date, or an equivalent certificate awarded by the Examination Board of the French Community during or after 1994;
2. A Certificate of Upper Secondary Education issued no later than the end of the 1992-1993 academic year, along with official documentation attesting to the student's ability to pursue higher education for students applying for a full-length undergraduate degree programme;
3. A diploma awarded by a higher education institution within the French Community that confers an academic degree issued under the above-mentioned Decree, or a diploma awarded by a university or institution dispensing full-time higher education in accordance with earlier legislation;
4. A higher education certificate or diploma awarded by an adult education centre;
5. A pass certificate for one of the [entrance examinations](#) organized by higher education institutions or by an examination board of the French Community; this document gives admission to studies in the sectors, fields or programmes indicated therein;
6. A diploma, certificate of studies or other qualification similar to those mentioned above, issued by the Flemish Community of Belgium (this qualification does not grant exemption from the [French language proficiency examination](#)), the German Community of Belgium or the Royal Military Academy;
7. A diploma, certificate of studies or other qualification obtained abroad and deemed equivalent to the first four mentioned above by virtue of a law, decree, European directive or international convention;

Note:

Requests for equivalence must be submitted no later than 14 July 2014 to the Equivalence department ([Service des équivalences](#)) of the Ministry of Higher Education and Scientific Research of the French Community of Belgium.

The following two qualifications are automatically deemed equivalent to the Certificate of Upper Secondary Education (Certificat d'enseignement secondaire supérieur – CESS):

- European Baccalaureate issued by the Board of Governors of a European School,
- International Baccalaureate issued by the International Baccalaureate Office in Geneva.

These two qualifications do not, however, provide automatic exemption from the [French language proficiency examination](#).

8. Official documentation attesting to a student's ability to pursue higher education (diplôme d'aptitude à accéder à l'enseignement supérieur - DAES), issued by the Examination Board of the French Community.

### Specific requirements

#### **Admission to undergraduate studies on the basis of accreditation of knowledge and skills obtained through professional or personal experience (Accreditation of Prior Experience)**

Subject to the general requirements laid down by the authorities of the higher education institution, with the aim of admission to the undergraduate programme, the examination boards accredit the knowledge and skills that students have obtained through their professional or personal experience.

This experience must correspond to at least five years of documented activity, with years spent in higher education being partially taken into account: 60 credits are deemed equivalent to one year of experience, with a maximum of two years being counted. At the end of an assessment procedure organized by the authorities of the higher education institution, the Examination Board will decide whether a student has sufficient skills and knowledge to successfully pursue undergraduate studies.

After this assessment, the Examination Board will determine the additional courses and possible exemptions constituting the supplementary requirements for the student's admission.

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### Exam of knowledge of the French language

Anyone not demonstrating sufficient [French language proficiency](#) will not be admitted to the first-year undergraduate examinations.

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### Special requirements

- Admission to **undergraduate studies in engineering: civil engineering and architect**

Pass certificate for the [special entrance examination for undergraduate studies in engineering: civil engineering and architect](#).

Admission to these courses is always subject to students passing the special entrance examination. Contact the faculty office for the programme content and the examination arrangements.

- Admission to **undergraduate studies in veterinary medicine**

[Admission to undergraduate studies in veterinary medicine is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses \(non-residents\)](#).

- Admission to **undergraduate studies in physiotherapy and rehabilitation**

[Admission to undergraduate studies in physiotherapy and rehabilitation is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses \(non-residents\)](#).

- Admission to **undergraduate studies in psychology and education: speech and language therapy**

[Admission to undergraduate studies in psychology and education: speech and language therapy is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses \(non-residents\)](#).

- Admission to **undergraduate studies in medicine and dental science**

[Admission to undergraduate studies in medicine and dental science is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses \(non-residents\)](#).

Note: students wishing to enrol for a Bachelor's degree in Medicine must first sit an aptitude test.

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## Teaching method

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The training provided in the Bachelor in Pharmacy programme is based on a variety of teaching methods enabling an integrated approach to the theoretical and practical aspects of the different disciplines with regard to medication.

The theory courses are aimed at developing a specialised knowledge base, using practical examples illustrating the complexity of pharmacy. Most of the theory courses are also associated with practical laboratory work, exercises and seminars during which the students are actively engaged in their training.

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.

Finally, through work placements in a professional environment, the Bachelor in Pharmacy training enables the students to discover for themselves the various aspects of the pharmacist's job. 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

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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.

## Possible trainings at the end of the programme

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### Positioning of the programme within the University cursus

The bachelor's degree entitles access to the master's of Pharmaceutical Sciences. Complementary masters with a professional vocation are organised in the practice of industrial pharmacy, clinical biology, hospital pharmacy, clinical hospital pharmacy, pharmaceutical technology.

### Other studies accessible upon completion of the programme

Other masters within the Faculty of Medicine, as well as some programmes from other faculties, may be accessible subject to certain prerequisites.

## Contacts

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## Curriculum Management

Entité de la structure FARM

Acronyme	<b>FARM</b>
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 ( <b>SSS</b> )
Faculté	Faculté de pharmacie et des sciences biomédicales ( <b>FASB</b> )
Commission de programme	Ecole de pharmacie ( <b>FARM</b> )

**Academic Supervisor :** [Joëlle Leclercq](#)

Président de la commission d'enseignement de l'école de pharmacie : **Emmanuel Hermans**

## Jury



Président des 3 années de bachelier : **Bernard Gallez**  
Secrétaire de jury de la 1re année : **Jean-Baptiste Demoulin**  
Secrétaire de jury de la 2e année : **Giulio Muccioli**  
Secrétaire de jury de la 3e année : **Giulio Muccioli**

## Usefull Contacts

Personne de contact de la 1re année de bachelier : **Fabienne Titeux**  
Personne de contact des 2e et 3e années de bachelier : **Josiane Toremans**  
Responsable administrative de la faculté de pharmacie et de sciences biomédicales : **Stéphanie Lozes**  
Conseiller aux études : **Giulio Muccioli**

