

At Bruxelles Woluwe - 300 credits - 5 years - Day schedule - In FrenchDissertation/Graduation Project : **YES** - Internship : **YES**Activities in English: **NO** - Activities in other languages : **NO**Activities on other sites : **NO**Main study domain : **Sciences biomédicales et pharmaceutiques**Organized by: **Faculty of Pharmacy and Biomedical Sciences (FASB)**Programme acronym: **BICL2MC** - Francophone Certification Framework: 7**Table of contents**

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BICL2MC - Introduction

Introduction

BICL2MC - Teaching profile

Learning outcomes

The specialist candidate assistant pharmacist (pharmacien assistant candidat spécialiste - PHACS) in clinical biology programme is spread over five years and prepares students for employment in a private or hospital biological analysis laboratory, with the emphasis on aspects of research in the field of clinical biology. This academic training is accompanied by the compulsory submission to the Ministry of Public Health of a 60-month work placement plan, in accordance with Belgian legal requirements, which confers entitlement to an authorisation to practise clinical biology in the field of medical chemistry, haematology and microbiology.

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

1 Laboratory management

- 1.a Understand and update pre-analytical, analytical and post-analytical processes.
- 1.b Anticipate long-term technical developments.
- 1.c Supervise technical staff (schedule management, training, recruitment, assessment, education fees, etc.).
- 1.d Coordinate tasks within a group of biologists.
- 1.e Ensure the preparation and monitoring of and compliance with the budget of a clinical biology laboratory.

2 Quality management

- 2.a Ensure the quality of the results of biomedical analyses.
- 2.b Develop and monitor compliance with quality assurance procedures.
- 2.c Ensure the traceability of services.
- 2.d Interpret the results of internal and external quality checks and improve the laboratory's performance.
- 2.e Be familiar with and understand the different standards for the validation of analytical methods.

3 Sense of responsibility

- 3.a Prevent, correct and manage cases of non-compliance and errors likely to occur during the analytical processes.
- 3.b Monitor the analytical protocols carefully and critically; be able to detect and respond effectively to any abnormal or pathological result.
- 3.c Integrate the various available medical data in order to validate the biological results produced by the laboratory.
- 3.d Take responsibility for decision-making

4 Communication

- 4.a Collaborate and communicate with other healthcare providers, particularly with the clinicians who are responsible for the patient.
- 4.b Manage internal and external disputes (complaints, claims, etc.) .
- 4.c Ensure the transmission of information within and outside the laboratory (new techniques, new analyses, etc.).
- 4.d Attend multidisciplinary clinical meetings.
- 4.e Read a scientific article from a critical perspective and understand the principles of evidence-based medicine

5 Ability to convey knowledge

- 5.a Write a scientific article (French/English).
- 5.b Present a scientific communication (French/English) in the field of clinical biology or another area of medicine .
- 5.c Provide training within or outside the laboratory.
- 5.d

Communicate as an expert-consultant with regard to other medical specialities

6 Ability to rapidly master a new area of expertise

- 6.a Apply their knowledge and skills in a new context .
- 6.b Familiarise themselves with and understand new technologies.

7 Mobility

- 7.a Be sufficiently independent to travel in Belgium and abroad.

Programme structure

A core training of 2 years is common and mandatory for all trainees. It involves basic theories and practice in each of the three fields of laboratory medicine: clinical chemistry (including endocrinology, toxicology, metabolic diseases, tumor markers,â€¦), microbiology (bacteriology, mycology, virology, parasitology) and haematology (cytology, haemostasis, immuno-haematology,â€¦). During this 2-year basis, the trainees will have to follow some lectures proposed to medical doctors (infectious diseases, clinical haematology, â€¦). Different tests and evaluations are planned during these two years.

The candidates must participate to all scientific meetings, staff or lectures recommended by the academic committee. They must participate to duties (night or week end) organized by the laboratories.

During the 3 last years, they have to perform some further specialization training in certified laboratories under the control of a certified supervisor, according to the law, and after validation both by the Health Authorities and by the Academic Committee. They are requested to participate actively to some research and development programmes resulting to a publication as first author.

They can perform their 3 years under different schemes according to their preferences:

- o Either in one medical field (mono-specialty) during the 3-year period: haematology, microbiology or clinical chemistry
- o Or in each of the three fields, dedicating 1 year per medical field
- o Or in two of the 3 fields, performing a 2-year period in one discipline and a 1-year period in another one (e.g. 2 years in haematology and 1 year in clinical chemistry,â€¦)

BICL2MC Programme

Detailed programme by subject

CORE COURSES

Le Master complémentaire en biologie clinique est un programme en 5 ans. Nous rencontrons actuellement un problème pour l'affichage ci-dessous de la cinquième année (cinquième colonne).

- Mandatory
- ✘ Optional
- △ Not offered in 2021-2022
- ⊖ Not offered in 2021-2022 but offered the following year
- ⊕ Offered in 2021-2022 but not the following year
- △ ⊕ Not offered in 2021-2022 or the following year
- Activity with requisites
- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

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

Year

1 2 3 4 5

o Premier bloc annuel (60 credits)

					1	2	3	4	5
● WBICL2100	Further Development in Clinical Chemistry	Lidvine Boland Joseph Dewulf Catherine Fillee Damien Gruson (coord.) Vincent Haufroid Diane Maisin Vincent Van Pesch	[FR] [q2] [50h] [4 Credits]	X					
● WBICL2107	Principe et méthodologie des dosages immunologiques	Diane Maisin	[FR] [q2] [15h] [2 Credits]	X					
● WBICL2106	Informatique appliquée à la biologie clinique	Benoît Debande (coord.) Catherine Fillee	[FR] [q1] [15h] [2 Credits]	X					
● WBICL2105	Apports de la biologie au diagnostic des principales maladies endocriniennes	Damien Gruson Dominique Maiter (coord.)	[FR] [q1] [22.5h] [3 Credits]	X					
● WFARM2502	Introduction to analytical toxicology	Laure Bindels (coord.) Lidvine Boland	[FR] [q2] [22.5h] [3 Credits]	X					
● WSBIM2246P	Human toxicology	Philippe Hantson	[FR] [q2] [30h] [3 Credits]	X					
● WMDS2137	Secteur maladies infectieuses	Leïla Belkhir Etienne Sokal Dimitri Van der Linden Jean Cyr Yombi (coord.)	[FR] [q2] [48h] [4 Credits]	X					

				Year				
				1	2	3	4	5
○ WMDS2221	Secteur hématologie	Marc André Bénédicte Brichard Véronique Deneys Cédric Hermans Catherine Lambert Nicole Straetmans (coord.) An Van Damme Marie-Christiane Vekemans	FB [q2] [48h] [4 Credits]	x				
○ WMDS2223	Secteur oncologie	Martine Berlière Bénédicte Brichard Philippe Collard François Duhoux Xavier Geets Benjamin Ledoux Sophie Lucas Jean-Pascal Machiels (coord.) Bertrand Tombal Geneviève Van Ooteghem	FB [q1] [24h] [2 Credits]	x				
○ WBICL2101	Questions spéciales d'immunologie, d'immunohématologie et de transfusion	Véronique Deneys Pascale Saussoy	FB [q2] [45h] [4 Credits]	x				
○ WBICL2109	Complément d'hématologie		FB [q2] [25h] [3 Credits]	x				
○ WBICL2102	Complements in microbiology	Ahalieyah Anantharajah Te-Din Huang Hector Rodriguez-Villalobos (coord.) Françoise Van Bambeke Alexia Verroken	FB [q2] [60h] [4 Credits]	x				
○ WBICL2103	Complements in Virology	Ahalieyah Anantharajah Pierre Bogaerts Géraldine Dessilly Benoît Kabamba-Mukadi (coord.) Jean Ruelle Anaïs Scohy	FB [q1] [45h] [3 Credits]	x				
○ WBICL2104	New aspects on the use of autoimmune serology	Damien Gruson (coord.) Imane Saad Albichr	FB [q2] [15h] [2 Credits]	x				
○ WBICL2108	Seminars of clinical chemistry and blood sampling	Lidvine Boland Joseph Dewulf Catherine Fillee Damien Gruson (coord.) Vincent Haufroid Diane Maisin	FB [q2] [60h+45h] [3 Credits]	x				
○ WBICL2110	Eléments de statistique appliqués à la biologie clinique	Catherine Fillee Annie Robert (coord.)	FB [q1] [15h] [2 Credits]	x				
○ WBICL2901	Travaux pratiques en biochimie médicale		FB [] [] [2 Credits]	x				
○ WBICL2902	Travaux pratiques en virologie		FB [] [] [2 Credits]	x				
○ WBICL2903	Travaux pratiques en microbiologie		FB [] [] [2 Credits]	x				
○ WBICL2904	Travaux pratiques en hématologie		FB [] [] [2 Credits]	x				
○ WBICL2381	Stage de biologie clinique 1re année, 1re partie		FB [q1+q2] [] [2 Credits]	x				
○ WBICL2391	Stage de biologie clinique 1re année, 2e partie		FB [q3] [] [2 Credits]	x				

○ Deuxième bloc annuel (60 crédits)

○ WBCMM22042	Séminaires de biologie clinique post gradués, 2e année		FB [q2] [8h] [2 Credits]		x			
○ WBICL2909	Séminaires d'accompagnement du stage de 2e année		FB [q2] [] [2 Credits]		x			
○ WBICL2382	Stage de biologie clinique 2e année, 1re partie		FB [q1+q2] [] [28 Credits]		x			
○ WBICL2392	Stage de biologie clinique 2e année, 2e partie		FB [q3] [] [22 Credits]		x			
○ WBICL2372	Mémoire de biologie clinique 1re partie		FB [] [] [6 Credits]		x			

○ Troisième bloc annuel (60 crédits)

○ WBCMM22043	Séminaires de biologie clinique post gradués, 3e année		FB [q2] [8h] [2 Credits]			x		
○ WBICL2905	Séminaires d'accompagnement du stage de 3ème année		FB [] [] [3 Credits]			x		
○ WBICL2383	Stage de biologie clinique 3e année, 1re partie		FB [q1+q2] [] [28 Credits]			x		

				Year				
				1	2	3	4	5
○ WBICL2393	Stage de biologie clinique 3e année, 2e partie		FR [q3] [] [21 Credits]				x	
○ WBICL2373	Mémoire de biologie clinique 2e partie		FR [] [] [6 Credits]				x	

○ Quatrième bloc annuel (60 credits)

○ WBCMM22044	Séminaires de biologie clinique post gradués, 4e année		FR [q2] [8h] [2 Credits]					x
○ WBICL2906	Séminaires d'accompagnement du stage de 4ème année		FR [] [] [3 Credits]					x
○ WBICL2384	Stage de biologie clinique 4e année, 1re partie		FR [q1+q2] [] [28 Credits]					x
○ WBICL2394	Stage de biologie clinique 4e année, 2e partie		FR [q3] [] [21 Credits]					x
○ WBICL2374	Mémoire de biologie clinique 3e partie		FR [] [] [6 Credits]					x

○ Cinquième bloc annuel (60 credits)

○ WBCMM22045	Séminaires de biologie clinique postgradués, 5e année		FR [q2] [8h] [2 Credits]					x
○ WBICL2907	Séminaires d'accompagnement du stage de 5ème année		FR [] [] [3 Credits]					x
○ WBICL2385	Stage de biologie clinique 5e année, 1re partie		FR [q1+q2] [] [27 Credits]					x
○ WBICL2395	Stage de biologie clinique 5e année, 2e partie		FR [q3] [] [20 Credits]					x
○ WBICL2375	Mémoire de biologie clinique 4e partie et présentation		FR [] [] [8 Credits]					x

⌘ Enseignement complémentaire facultatif

Selon l'intérêt et le projet de l'étudiant, les cours suivants (ou d'autres cours) peuvent être choisis par l'étudiant en complément de la formation ou en remplacement de l'un ou l'autre enseignement obligatoire en accord avec le responsable du programme.

⌘ WFSP2113	Gestion financière de base	Pascal Mertens	FR [q2] [30h+15h] [3 Credits]	x	x	x	x	x
⌘ WSBIM2230	Biochemistry of inborn errors of metabolism	Marie-Cécile Nassogne	FR [q1] [30h] [3 Credits]	x	x	x	x	x
⌘ WSBIM2246M	Human toxicology	Philippe Hantson	FR [q2] [22.5h] [3 Credits]	x	x	x	x	x

The programme's courses and learning outcomes

For each UCLouvain training programme, a [reference framework of learning outcomes](#) specifies the the skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference framework of learning outcomes.

BICL2MC - Information

Access Requirements

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

SUMMARY

- [General access requirements](#)
- [Specific access requirements](#)

General access requirements

Subject to the general requirements laid down by the academic authorities, admission to the specialized Master's degree programme will be granted to students who fulfil the entry requirements for studies leading to the award of a Master's (second-cycle) degree and who hold a second-cycle diploma, degree, certificate or other qualification issued within or outside the French Community of Belgium, or whose prior learning or experience has been accredited by the Examination Board as being equivalent to at least 300 credits.

Specific access requirements

Specific Admission Requirements

L'admission est conditionnée à deux critères :

1. la possession d'un diplôme belge ou européen de Master en Sciences Pharmaceutiques, ou éventuellement d'un diplôme de Master en Sciences Chimiques (120 crédits) après avoir suivi un Certificat Universitaire en Sciences Pharmaceutiques de mise à niveau
2. la réussite du Concours organisé par la commission d'enseignement de la biologie clinique de l'école de pharmacie.

La formation en biologie clinique est une formation assimilée aux études médicales et est donc réglementée par les limitations décrites dans l'article 49 ter des lois sur l'Art de Guérir.

Toute demande doit être introduite au secrétariat de l'école de pharmacie avec dossier et curriculum complet au plus tard durant le mois de mai précédant l'année académique sollicitée. Une sélection sera opérée par un Concours organisé au début du mois de juillet. Le nombre de mandats rémunérés est limité.

Les candidats étudiants non francophones (UE et hors UE) devront apporter la preuve, dans leur demande d'admission, d'une maîtrise suffisante de la langue française (niveau B1 du [Cadre européen commun de référence](#) , pages 24 à 29)

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Evaluation

The evaluation methods comply with the regulations concerning studies and exams (<https://uclouvain.be/fr/decouvrir/rgee.html>). More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".

Contacts

Curriculum Management

Faculty

Structure entity	SSS/FASB
Denomination	Faculty of Pharmacy and Biomedical Sciences (FASB)
Sector	Health Sciences (SSS)
Acronym	FASB
Postal address	Avenue Mounier 73 - bte B1.73.02 1200 Woluwe-Saint-Lambert

Mandate(s)

- Dean : Raphaël Frédérick

Commission(s) of programme

- Ecole de pharmacie (FARM)

Other academic Supervisor(s)

- Vincent Haufroid (<https://uclouvain.be/repertoires/vincent.haufroid>)

Jury

- Président du jury d'examens: Vincent Haufroid (<https://uclouvain.be/repertoires/vincent.haufroid>)
- Secrétaire du jury d'examens: Damien Gruson (<https://uclouvain.be/repertoires/damien.gruson>)

Useful Contact(s)

- Secrétariat et gestion des admissions: Guillaume Arnould (<https://uclouvain.be/repertoires/guillaume.arnould>)

