

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**

Introduction	2
Teaching profile	3
- Learning outcomes	3
- Programme structure	3
- Detailed programme	4
- Programme by subject	4
- The programme's courses and learning outcomes	7
Information	8
- Access Requirements	8
- Evaluation	9
- Contacts	9

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€)

[> Core courses](#) [en-prog-2020-bicl2mc-tronc_commun]

BICL2MC Detailed programme

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
- △ Courses not taught during 2020-2021
- ⊕ Periodic courses taught during 2020-2021
- ⊗ Optional
- ⊖ Periodic courses not taught during 2020-2021
- Activity with requisites

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

Year

1 2 3 4 5

o Premier bloc annuel (60 credits)

● WBICL2100	Further Development in Clinical Chemistry	Joseph Dewulf Catherine Fillee Damien Gruson (coord.) Vincent Haufroid Diane Maisin Vincent van Pesch Pierre Wallemacq	50h	4 Credits	q2	x								
● WBICL2107	Principe et méthodologie des dosages immunologiques	Diane Maisin	15h	2 Credits	q2	x								
● WBICL2106	Informatique appliquée à la biologie clinique	Benoît Debande (coord.) Catherine Fillee	15h	2 Credits	q1	x								
● WBICL2105	Apports de la biologie au diagnostic des principales maladies endocriniennes	Damien Gruson Dominique Maiter (coord.)	22.5h	3 Credits	q1	x								
● WFARM2502	Further development in analytical toxicology and phytopharmacy	Pierre Wallemacq	22.5h	3 Credits	q2	x								
● WSBIM2246P	Toxicologie humaine (partim physiopathologie des intoxications, 30h)	Philippe Hantson	30h	3 Credits	q2	x								
● WMDS2137	Secteur maladies infectieuses	Leïla Belkhir Etienne Sokal Dimitri Van Der Linden Jean Cyr Yombi (coord.)	48h	4 Credits	q2	x								

						Year				
						1	2	3	4	5
○ WMDS2221	Secteur hématologie	Marc André Bénédicte Brichard Véronique Deneys Violaine Havelange Cédric Hermans Catherine Lambert Nicole Straetmans (coord.) Eric Van Den Neste Marie-Christiane Vekemans	48h	4 Credits	q2	x				
○ WMDS2223	Secteur oncologie	Martine Berliere Bénédicte Brichard Philippe Collard Pascale Cornette Francois Duhoux Xavier Geets Sophie Lucas Jean-Pascal Machiels (coord.) Bertrand Tombal	24h	2 Credits	q1	x				
○ WBICL2101	Questions spéciales d'immunologie, d'immunohématologie et de transfusion	Véronique Deneys Stéphane Eeckhoudt Pascale Saussoy Michel Toungouz Neveissignsky (coord.)	45h	4 Credits	q2	x				
○ WBICL2109	Complément d'hématologie	Jean-Philippe Defour (coord.) Marie-Astrid van Dievoet	25h	3 Credits	q2	x				
○ WBICL2102	Complements in microbiology	Pierre Bogaerts Te-Din Huang Hector Rodriguez- Villalobos (coord.) Françoise Van Bambeke Alexia Verroken	60h	4 Credits	q2	x				
○ WBICL2103	Complements in Virology	Pierre Bogaerts Benoît Kabamba- Mukadi (coord.) Anaïs Scohy	45h	3 Credits	q2	x				
○ WBICL2104	New aspects on the use of autoimmune serology	Damien Gruson (coord.) Anaïs Scohy	15h	2 Credits	q2	x				
○ WBICL2108	Seminars of clinical chemistry and blood sampling	Dorina Becheanu Catherine Fillee Damien Gruson (coord.) Vincent Haufroid Pierre Wallemacq	60h+45h	3 Credits	q2	x				
○ WBICL2110	Éléments de statistique appliqués à la biologie clinique	Catherine Fillee Annie Robert (coord.)	15h	2 Credits	q1	x				
○ WBICL2901	Travaux pratiques en biochimie médicale			2 Credits		x				
○ WBICL2902	Travaux pratiques en virologie			2 Credits		x				
○ WBICL2903	Travaux pratiques en microbiologie			2 Credits		x				
○ WBICL2904	Travaux pratiques en hématologie			2 Credits		x				
○ WBICL2381	Stage de biologie clinique 1re année, 1re partie			2 Credits	q1+q2	x				
○ WBICL2391	Stage de biologie clinique 1re année, 2e partie			2 Credits	q3	x				

○ Deuxième bloc annuel (60 crédits)

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

○ Troisième bloc annuel (60 crédits)

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

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

○ Quatrième bloc annuel (60 credits)

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

○ Cinquième bloc annuel (60 credits)

○ WBCMM22045	Séminaires de biologie clinique postgradués, 5e année		8h	2 Credits	q2					x
○ WBICL2907	Séminaires d'accompagnement du stage de 5ème année			3 Credits						x
○ WBICL2385	Stage de biologie clinique 5e année, 1re partie			27 Credits	q1+q2					x
○ WBICL2395	Stage de biologie clinique 5e année, 2e partie			20 Credits	q3					x
○ WBICL2375	Mémoire de biologie clinique 4e partie et présentation			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	30h+15h	3 Credits	q2	x	x	x	x	x
⌘ WSBIM2230	Biochimie des erreurs innées du métabolisme	Marie-Cécile Nassogne	30h	3 Credits	q1	x	x	x	x	x
⌘ WSBIM2246M	Toxicologie humaine (partim toxicologie médicale, 22,5h)	Philippe Hantson	22.5h	3 Credits	q2	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 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?"*

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. L'accès à cette formation pour des candidats non ressortissants CEE et non diplômés pharmaciens en Belgique est par conséquent beaucoup plus restrictif. En cas d'avis favorable de l'école de pharmacie et de la commission d'enseignement de la biologie clinique, l'admission d'un tel candidat se limitera à une formation non diplômante de maximum 3 années de stage.

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)

//

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 : Emmanuel Hermans

Commission(s) of programme

- Ecole de pharmacie ([FARM](#))

Other academic Supervisor(s)

- Pierre Wallemacq

Jury

- Pierre Wallemacq
- Vincent Haufroid

Useful Contact(s)

- Guillaume Arnould

