

SBIM2M - Introduction

Introduction

i.e.:

- recognise their errors and correct them;
 - quote their sources and avoid plagiarism;
 - understand and apply the rules relating to experimentation.
- 5.c Develop their learning by cultivating scientific curiosity and participate in the dissemination of knowledge based on robust scientific thinking.

5.d Understand the rules of scientific publication.

6. If they choose the Research focus: display command of the specific knowledge base and conduct an original research project in a specialist field of biomedicine

6.a Have a comprehensive understanding of the fundamental principles and concepts of one of the following areas of biomedicine: molecular and cellular pathophysiology, cancerology or neuroscience; understand the diagnostic and therapeutic developments associated with the chosen field.

6.b Understand the constraints on the development of a scientific project, whether it concerns basic or applied research; structure and substantiate a funding application; identify the subject of a patent and be familiar with the submission procedure.

6.c Use the skills acquired during the Master's programme in a new professional environment, whether it is an institution or a company involved in biomedical research.

7. If they choose the Professional focus in nutrition, conduct themselves as experts in forging a link between nutrition and health, able to adopt a solid scientific and critical approach in the various professional environments concerned

7.a Have an in-depth understanding of the fundamental principles and concepts of basic and clinical nutrition and be able to use them to identify and test research hypotheses concerning mechanisms, prevention, diagnosis and treatment in the field of nutrition.

7.b Understand the constraints on the development of a scientific project, whether it concerns basic or applied research; structure and substantiate a funding application.

7.c Use the skills acquired during the Master's programme in a new professional environment, whether it is an institution or a company involved in nutrition in the broadest sense.

8. If they choose the Professional focus in toxicology: incorporate the multidisciplinary skills required to evaluate and prevent risks to human health caused by chemical

8.a Understand and use the fundamental principles and concepts of modern toxicology.

8.b Plan, conduct and interpret an experimental toxicological study.


8.c Critically analyse and summarise the available toxicological data for a chemical substance and incorporate this information in a regulatory context (in particular the European regulation REACh).

9. If they choose the Professional focus in clinical biomedicine: incorporate the knowledge and skills required to participate in large-scale clinical studies

9.a Incorporate the knowledge and skills enabling them to understand the purpose and pertinence of a new diagnostic or therapeutic tool in relation to a human pathology.

9.b Plan, conduct and interpret a large-scale clinical study, applying the appropriate IT and statistical analyses.

CORE COURSES

- Mandatory
 - ✘ Optional
 - △ Not offered in 2024-2025
 - ⊙ Not offered in 2024-2025 but offered the following year
 - ⊕ Offered in 2024-2025 but not the following year
 - △ ⊕ Not offered in 2024-2025 or the following year
 - Activity with requisites
- 
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LIST OF FOCUSES

- > **Research Focus** [en-prog-2024-sbim2m-wsbim200a]
- > **Professional Focus : Human Nutrition** [en-prog-2024-sbim2m-wsbim201s]
- > **Professional Focus : Toxicology** [en-prog-2024-sbim2m-wsbim202s]
- > **Professional Focus : Clinical Biomedical Sciences** [en-prog-2024-sbim2m-wsbim203s]

RESEARCH FOCUS [30.0]

- Mandatory
- ⌘ Optional
- △ Not offered in 2024-2025
- ⊖ Not offered in 2024-2025 but offered the following year
- ⊕ Offered in 2024-2025 but not the following year
- △ ⊕ Not offered in 2024-2025 or the following year
- Activity with requisites
- 🌐 Open to incoming exchange students
- 🌐 Not open to incoming exchange students
- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

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

PROFESSIONAL FOCUS : HUMAN NUTRITION [30.0]

- Mandatory
 - ✘ Optional
 - △ Not offered in 2024-2025
 - ⊖ Not offered in 2024-2025 but offered the following year
 - ⊕ Offered in 2024-2025 but not the following year
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● WMDS2223	Secteur oncologie	Martine Berlière
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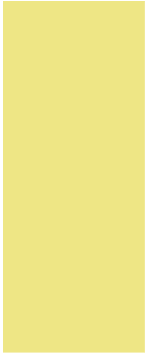


OPTIONS [20.0]

- > [Option oncologie](#) [en-prog-2024-sbim2m-wsbim908o]
- > [Option neurosciences](#) [en-prog-2024-sbim2m-wsbim907o]
- > [Option pathophysiologie cellulaire et moléculaire](#) [en-prog-2024-sbim2m-wsbim904o]

OPTION NEUROSCIENCES [20.0]

- Mandatory
 - ✘ Optional
 - △ Not offered in 2024-2025
 - ⊖ Not offered in 2024-2025 but offered the following year
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 - Activity with requisites
 - 🌐 Open to incoming exchange students
 - 🌐 Not open to incoming exchange students
 - [FR] Teaching language (FR, EN, ES, NL, DE, ...)
-



OPTION NUTRITION HUMAINE [20.0]

- Mandatory
- ✘ Optional
- △ Not offered in 2024-2025
- ⊖ Not offered in 2024-2025 but offered the following year
- ⊕ Offered in 2024-2025 but not the following year
- △ ⊕ Not offered in 2024-2025 or the following year
- Activity with requisites
- 🌐 Open to incoming exchange students
- 🌐 Not open to incoming exchange students
- (FR) Teaching language (FR, EN, ES, NL, DE, ...)

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

Year

1 2

o Content:

Si une option comprend une UE déjà présente dans la finalité choisie par l'étudiant, il devra, avec l'accord de la faculté, prendre un autre cours afin que l'option totalise 20 crédits au minimum.

o Cours au choix

OPTION TOXICOLOGIE [20.0]

- Mandatory
- ⊗ Optional
- △ Not offered in 2024-2025
- ⊖ Not offered in 2024-2025 but offered the following year
- ⊕ Offered in 2024-2025 but not the following year
- △ ⊕ Not offered in 2024-2025 or the following year
- Activity with requisites
- 🌐 Open to incoming exchange students
- 🚫 Not open to incoming exchange students
- (FR) Teaching language (FR, EN, ES, NL, DE, ...)

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

Year

1 2

o **Content:**

Si une option comprend une UE déjà présente dans la finalité choisie par l'étudiant, il devra, avec l'accord de la faculté, prendre un autre cours afin que l'option totalise 20 crédits au minimum.

o **Cours obligatoires**

○ WSBIM2290	Introduction to laboratory animal science	Jean-Paul Dehoux	(FR) [q1] [37h] [3 Credits] 🌐	X
○ WSBIM2137	Nutrition and environment: biological and toxicological aspects	Philippe de Timary Cathy Debier Nathalie Delzenne (coord.) Sandrine Ellero-Simatos (compensates) Laure Bindels Amandine Everard Françoise Smets	(FR) [q1] [30h] [4 Credits] 🌐 > English-friendly	X

o **Cours au choix**

L'étudiant choisit minimum 3 crédits parmi les cours suivants.

⊗ WFARM1303	Clinical Chemistry	Joseph Dewulf Catherine Fillee Damien Gruson Vincent Haufroid (coord.) Madeleine Rousseaux	(FR) [q2] [20h] [2 Credits] 🌐	X
⊗ WFARM2180	Organotoxicity : molecular, cellular and functional aspects	Olivier Feron (coord.) Philippe Lysy Xavier Wittebole	(FR) [q2] [30h+15h] [3 Credits] 🌐 > English-friendly	X
⊗ WFARM2514	Drug dependence and addiction	Lidvine Boland (compensates) Laure Bindels Philippe de Timary Sophie Gohy Vincent Haufroid Emmanuel Hermans (coord.) Denis Jacques		

Supplementary classes

To access this Master, students must have a good command of certain subjects. If this is not the case, in the first annual block of their Masters programme, students must take supplementary classes chosen by the faculty to satisfy course prerequisites.

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

○ Finalités

⊗ -

L'étudiant souhaitant intégrer la finalité approfondie sera invité à suivre le module complémentaire constitué des unités d'enseignement suivantes:

○ Cours de base

○ WFARM1221S	Biochemistry and molecular biology	Nathalie Delzenne (coord.)	FR [q1] [50h+10h] [6 Credits] 🌐
○ WFARM1213	Human physiology and basics of physiopathology	Olivier Feron (coord.) Emmanuel Hermans Jean-Christophe Jonas (compensates Mandy Grootaert)	FR [q2] [60h] [6 Credits] 🌐 > English-friendly
○ WMDS1230	Biologie cellulaire médicale et expérimentale	Stefan Constantinescu (coord.) Christophe Pierreux Donatienne Tyteca	FR [q1] [30h+20h] [4 Credits] 🌐
○ LANGL2454	English for biomedical students	Nicholas Gibbs Nevin Serbest (coord.)	EN [q2] [30h] [3 Credits] 🌐
○ WSBIM1334	general immunology	Isabelle Leclercq Sophie Lucas (coord.) Jean-Christophe Renaud Rémy Ruelle Benoit Van den Eynde Nathalie Vigneron (compensates Sophie Lucas)	FR [q1] [65h] [6 Credits] 🌐 > English-friendly
○ WMD1006	Cytology and general histology	Christophe Pierreux	FR [q2] [10h+40h] [5 Credits] 🌐
○ WFARM1282	General microbiology	Thomas Michiels	FR [q1] [20h+15h] [3 Credits] 🌐
○ WSBIM1226	Molecular biology (including epigenetics) and tutorials	Charles De Smet Frédéric Lemaigre Thomas Michiels (coord.)	FR [q1] [30h+10h] [3 Credits] 🌐
○ WSBIM1320	Introduction to experimental approaches in cellular and molecular biology	Luc Bertrand Anne des Rieux Sandrine Horman Donatienne Tyteca (coord.)	FR [q2] [30h] [3 Credits] 🌐
○ WSBIM1302	Molecular Virology	Thomas Michiels	FR [q1] [25h] [3 Credits] 🌐
○ WSBIM1382	Genetics and applied biotechnology	Luc Bertrand (coord.) Laure Dumoutier Géraldine Laloux Nisha Limaye	FR [q1] [30h] [3 Credits] 🌐 > English-friendly

WSBIM1211

Methodolgy of cell and molecular biology



○ Cours au choix

L'étudiant est invité à choisir 3 unités d'enseignement parmi la liste proposée ci-dessous



WSBIM1302

Molecular Virology

○ WSBIM1320	Introduction to experimental approaches in cellular and molecular biology	Luc Bertrand Anne des Rieux Sandrine Horman Donatienne Tyteca (coord.)	EB [q2] [30h] [3 Credits] 
○ WSBIM1205	Introduction to toxicology	Lidvine Boland Nathalie Delzenne Laure Elens Vincent Haufroid François Huaux Violaine Verougstraete Alexis Wérion	EB [q2] [30h] [3 Credits] 
○ WFARM1305	Elements of General Pathology	Mélanie Dechamps Olivier Feron (coord.)	

- WSBIM2112 - [Cell and molecular biology: experimental systems](#)
 - WSBIM2151 - [Experimental approaches in neuroscience](#)
 - WSBIM2154 - [Neuroanatomy and anatomo-functional imaging techniques](#)
 - WSBIM2155 - [Developmental neurobiology](#)
 - WSBIM2156 - [Animal and human electrophysiology project](#)
- WSBIM2255** "[Seminar on neurological and psychiatric disease](#)" has prerequisite(s) WSBIM2280 ET (WSBIM2112 OU WSBIM2151) ET WSBIM2154 ET WSBIM2155 ET WSBIM2156
- WSBIM2280 - [Scientific communication workshop](#)
 - WSBIM2112 - [Cell and molecular biology: experimental systems](#)
 - WSBIM2151 - [Experimental approaches in neuroscience](#)
 - WSBIM2154 - [Neuroanatomy and anatomo-functional imaging techniques](#)
 - WSBIM2155 - [Developmental neurobiology](#)
 - WSBIM2156 - [Animal and human electrophysiology project](#)
- WSBIM2271** "[International research internship](#)" has prerequisite(s) WSBIM2198 ET WSBIM2197
- WSBIM2198 - [Pre-thesis in biomedical sciences](#)
 - WSBIM2197 - [Laboratory internship \(part 1\)](#)
- WSBIM2272** "[Work placement](#)" has prerequisite(s) WSBIM2198 ET WSBIM2197
- WSBIM2198 - [Pre-thesis in biomedical sciences](#)
 - WSBIM2197 - [Laboratory internship \(part 1\)](#)
- WSBIM2273** "[Research placement](#)" has prerequisite(s) WSBIM2198 ET WSBIM2197
- WSBIM2198 - [Pre-thesis in biomedical sciences](#)
 - WSBIM2197 - [Laboratory internship \(part 1\)](#)
- WSBIM2284** "[Cellular and molecular pathophysiology of human diseases \(Part 2\)](#)" has prerequisite(s) WSBIM2280 ET (WSBIM2112 OU WSBIM2151)
- WSBIM2280 - [Scientific communication workshop](#)
 - WSBIM2112 - [Cell and molecular biology: experimental systems](#)
 - WSBIM2151 - [Experimental approaches in neuroscience](#)
- WSBIM2285** "[Biomedical project design, Pathophysiology](#)" has prerequisite(s) WSBIM2280 ET (WSBIM2112 OU WSBIM2151)
- WSBIM2280 - [Scientific communication workshop](#)
 - WSBIM2112 - [Cell and molecular biology: experimental systems](#)
 - WSBIM2151 - [Experimental approaches in neuroscience](#)
- WSBIM2297** "[Stage en laboratoire \(2e partie\)](#)" has prerequisite(s) WSBIM2197
- WSBIM2197 - [Laboratory internship \(part 1\)](#)
- WSBIM2298** "[Mémoire expérimental en sciences biomédicales](#)" has prerequisite(s) WSBIM2198
- WSBIM2198 - [Pre-thesis in biomedical sciences](#)

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.

SBIM2M - Information

Access Requirements

Master course admission requirements are defined by the French Community of Belgium Decree of 7 November 2013 defining the higher education landscape and the academic organisation of courses.

General and specific admission requirements for this programme must be satisfied at the time of enrolling at the university.


Unless explicitly mentioned, the bachelor's, master's and licentiate degrees listed in this table or on this page are to be understood as those issued by an institution of the French, Flemish or German-speaking Community, or by the Royal Military Academy.

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](#)
- > [University Bachelors](#)
- > [Non university Bachelors](#)
- > [Holders of a 2nd cycle University degree](#)
- > [Access based on validation of professional experience](#)
- > [Access based on application](#)
- > [Admission and Enrolment Procedures for general registration](#)

Specific access requirements

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)

University Bachelors

Diploma	Special Requirements	Access	Remarks
UCLouvain Bachelors			
Bachelor in Biomedicine		Direct access	
Bachelor in Dentistry Bachelor in Medicine Bachelor in Pharmacy		Access with additional training	Additional requirements for admission de max 15 crédits intégrés dans le programme du master
Bachelor in Veterinary Medicine Bachelor in Chemistry Bachelor in Physics Bachelor in Bioengineering		Access based on application	Additional requirements for admission de max 60 crédits intégrés dans le programme du master
Others Bachelors of the French speaking Community of Belgium			
bachelier en sciences biomédicales		Direct access	
bachelier en médecine sciences pharmaceutiques sciences dentaires		Access with additional training	Additional requirements for admission de max 15 crédits intégrés dans le programme du master
bachelier en médecine vétérinaire bachelier en sciences chimiques bachelier en sciences de l'ingénieur orientation bioingénieur bachelier en sciences physiques		Access based on application	Additional requirements for admission de max 60 crédits intégrés dans le programme du master
Bachelors of the Dutch speaking Community of Belgium			
bachelier en sciences biomédicales		Direct access	
bachelier en médecine sciences pharmaceutiques sciences dentaires		Access with additional training	Additional requirements for admission de max 15 crédits

bachelier en médecine vétérinaire bachelier en sciences chimiques bachelier en sciences de l'ingénieur orientation bioingénieur bachelier en sciences physiques	Access based on application	intégrés dans le programme du master Additional requirements for admission de max 60 crédits intégrés dans le programme du master
Foreign Bachelors		
diplôme universitaire jugé équivalent dans des domaines autres que ceux repris ci-dessus ou ayant acquis une expérience pouvant être valorisée dans le domaine des sciences biomédicales	Access based on application	Accès en bachelier. Programme établi par le jury d'admission sur base du parcours antérieur de minimum 60 crédits.

Non university Bachelors

> Find out more about [links](#) to the university

Diploma	Access	Remarks
BA - sage-femme - crédits supplémentaires entre 15 et 30 BA - technologue de laboratoire médical - crédits supplémentaires entre 30 et 60 BA - technologue en imagerie médicale - crédits supplémentaires entre 30 et 60 BA de spécialisation en anesthésie - crédits supplémentaires entre 15 et 30 BA de spécialisation en soins intensifs et aide médicale urgente - crédits supplémentaires entre 15 et 30 BA en chimie, orientation biochimie - crédits supplémentaires entre 30 et 60 BA en chimie, orientation biotechnologie - crédits supplémentaires entre 30 et 60 BA en chimie, orientation chimie appliquée - crédits supplémentaires entre 30 et 60 BA en chimie, orientation environnement - crédits supplémentaires entre 30 et 60 BA en diététique - crédits supplémentaires entre 30 et 60 BA en ergothérapie - crédits supplémentaires entre 30 et 60 BA en soins infirmiers - crédits supplémentaires entre 30 et 60 BA en soins infirmiers pour titulaires d'un brevet d'infirmier hospitalier - crédits supplémentaires entre 30 et 60 BA: infirmier responsable de soins généraux - crédits supplémentaires entre 15 et 30	Les enseignements supplémentaires éventuels peuvent être consultés dans le module complémentaire .	Type court

Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	Remarks
"Licenciés"			
		Direct access	
Masters			
Master [120] in Biochemistry and Molecular and Cell Biology		Access with additional training	Type long
Master [120] in Pharmacy		Access based on application	Type long

Access based on validation of professional experience

> It is possible, under certain conditions, to use one's personal and professional experience to enter a university course without having the required qualifications. However, validation of prior experience does not automatically apply to all courses. Find out more about [Validation of priori experience](#).

Access based on application

Access based on application : access may be granted either directly or on the condition of completing additional courses of a maximum of 60 ECTS credits, or refused.

Admission and Enrolment Procedures for general registration

Entity

Structure entity	SSS/FASB/SBIM
Denomination	(SBIM)
Faculty	Faculty of Pharmacy and Biomedical Sciences (FASB)
Sector	Health Sciences (SSS)
Acronym	SBIM
Postal address	Avenue Mounier 73 - bte B1.73.04 1200 Woluwe-Saint-Lambert Tel: +32 (0)2 764 73 62 - Fax: +32 (0)2 764 73 63

Academic supervisor: [Charles De Smet](#)

Jury

- Président de jury: [Charles De Smet](#)
- Secrétaire du jury: [Laurent Gatto](#)

Useful Contact(s)

- Conseiller aux études: [Laure Dumoutier](#)
- Secrétaire de l'école: [Guillaume Arnould](#)
- Président de la commission d'enseignement de l'école de sciences biomédicales: [Charles De Smet](#)
- Responsable administrative de la faculté de pharmacie et de sciences biomédicales: [Johanne Garny](#)

