UCLouvain

SBIM2M1

*2024 - 2025*

# Master [60] in Biomedicine

**At Bruxelles Woluwe - 60 credits - 1 year - Day schedule - In French**

# SBIM2M1 - Introduction

## Introduction

# SBIM2M1 - Teaching profile

## Learning outcomes

The programme of the 60 credit Master is open to any students who wish to undergo additional training in biomedical sciences without having to do the two years of the full Master.

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

1 Use integrated and evolving knowledge in biomedical sciences

1.a Use general knowledge and methodologies in experimental biomedical sciences: normal and pathological biochemistry and molecular biology, cell biology, general and special histology, general anatomy, general and special physiology.
1.b Understand and criticize the experimental approaches and observation methods that led to this knowledge.
1.c Master the modern sources of knowledge and be able to effectively search for new and specific information, and criticize it.

2

Analyze, criticize, and propose perspectives of experiments in biomedical sciences

2.a

Analyze the observations in a rigorous and critical way:

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### Cours au choix (8 credits)

*L'étudiant choisit au minimum 8 crédits de cours dans l'ensemble du programme de Master 120 en sciences biomédicales. Sous condition de l'accord du responsable de programme et du promoteur du mémoire, l'étudiant peut éventuellement choisir les activités de Work placement (WSBIM2272) ou Research placement (WSBIM2273).*

| | | | |
|---|---|---|---|
| O WSBIM2284 | Cellular and molecular pathophysiology of human diseases (Part 2)<br>*Ce cours ne sera plus donné en 2025-2026 ; à la place, l'étudiant.e aura le choix entre 3 cours en lien avec le Développement durable et la transition (LBIR2050A, WFARM1375 et WSBIM2139)* | Christiani<br>Andrade Amorim<br>Luc Bertrand<br>Cyril Corbet<br>Chantal Dessy<br>Laure Dumoutier<br>Patrick Henriet<br>Sandrine Horman<br>Jean-Christophe Jonas (coord.) | EN [q2] [10h+20h] [3 Credits] |
| O WSBIM2218 | Special issues in molecular and cellular pathophysiology | Christiani<br>Andrade Amorim<br>Luc Bertrand<br>Cyril Corbet<br>Chantal Dessy<br>Laure Dumoutier<br>Antoine Froidure<br>Bernard Hanseeuw<br>Patrick Henriet<br>Sandrine Horman<br>Jean-Christophe Jonas (coord.)<br>Shakeel Kautbally<br>Pietro Maggi<br>Julie Stockis | EN [q2] [30h] [3 Credits] |

**O Cours au choix**

*L'étudiant choisit 10 crédits parmi les unités d'enseignement ci-dessous.*

| | | | |
|---|---|---|---|
| ⊠ WSBIM2215 | Post-translational regulation of proteins | Luc Bertrand (coord.)<br>Guido Bommer<br>Jean-François Collet<br>Jean Baptiste Demoulin | EN [q1] [20h] [2 Credits]<br>*> English-friendly* |
| ⊠ WSBIM2141P | Intercellular signaling and tumor biology - Intercellular signaling and tumor biology (part) | Frédéric Lemaigre (coord.) | EN [q1] [20h] [2 Credits]<br>*> English-friendly* |
| ⊠ WSBIM2181 | Molecular and cellular aspects of nutrition | Luc Bertrand<br>Patrice Cani (coord.)<br>Patrick Gilon<br>Nicolas Lanthier<br>Maria Veiga da Cunha | EN [q1] [30h] [4 Credits] |
| ⊠ WSBIM2185 | Cellular and molecular pathophysiology of human diseases | Luc Bertrand<br>Cyril Corbet<br>Laure Dumoutier<br>Patrick Henriet<br>Sandrine Horman<br>Jean-Christophe Jonas (coord.)<br>Pietro Maggi | EN [q1] [30h] [3 Credits] |
| ⊠ WSBIM2116 | Maladies inflammatoires, auto-immunitaires et cancer: aspects immunologiques | Laure Dumoutier (coord.)<br>Sophie Lucas<br>Jean-Christophe Renauld<br>Pierre van der Bruggen | EN [q1] [20h+10h] [3 Credits]<br>*> English-friendly* |
| ⊠ WSBIM2229 | Interdisciplinary program in translational medicine*Rena351TJ 0 g /F2 0 -1 17.6523.40 0 476628.1041 87 [(Rena.J 1 0 0 -1 0 36.522 c942 1* | | |

## OPTION NEUROSCIENCES [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...)

### Content:

| | | | |
|---|---|---|---|
| WSBIM2154 | Neuroanatomy and anatomo-functional imaging techniques | | FR [q1] [30h] [4 Credits] |
| WSBIM2155 | Developmental neurobiology | Fadel Tissir | FR [q1] [30h] [4 Credits] |
| WSBIM2156 | Animal and human electrophysiology project | | |

| | | | |
|---|---|---|---|
| ⛒ WSBIM2229 | Interdisciplinary program in translational medicine<br>*Ce cours ne peut être choisi que par les étudiant inscrits en master 120. Ce programme interuniversitaire est financé par le Fond Baillet Latour. Plus de renseignements sur le site.*<br>*L'intégration de ce cours dans votre PAE sera hors progression. Les crédits acquis n'entreront pas en considération dans l'acquisition des 120 crédits obligatoires pour l'obtention de votre diplôme de master.* | | FR [q2] [50h] [5 Credits] |

# 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...)

## Content:

### Cours obligatoires

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

### Cours au choix

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

| | | | |
|---|---|---|---|
| WFARM1303 | Clinical Chemistry | Joseph Dewulf<br>Catherine Fillee<br>Damien Gruson<br>Vincent Haufroid (coord.)<br>Madeleine Rousseaux | [FR] [q2] [20h] [2 Credits] |
| WFARM2180 | Organotoxicity : molecular, cellular and functional aspects | Olivier Feron (coord.)<br>Philippe Lysy<br>Xavier Wittebole | |

## Stage obligatoire au choix (10 credits)

*L'étudiant inscrit au Master 120 choisit un stage parmi les trois suivants. L'étudiant inscrit au Master 60 remplace ces activités de l'option par tout autre cours proposé dans les finalités et les options de master en sciences biomédicales.*

| | |
|---|---|
| ⊠ WSBIM2271 | |

[redacted]

# OPTION SCIENCES BIOMÉDICALES CLINIQUES [20.0]

- O 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...)

## O Content:

### O Métabolisme et pathologies particulières

| | | | |
|---|---|---|---|
| O WSBIM2230 | Biochemistry of inborn errors of metabolism | Joseph Dewulf (coord.)<br>Marie-Cécile Nassogne | FR [q1] [30h] [3 Credits] |
| O WSBIM2246 | Clinical toxicology | Caroline Dahlqvist<br>Bénédicte Delire<br>Laure Elens (coord.)<br>Antoine Froidure<br>Sophie Gohy<br>Ludovic Gérard<br>Marie-Cécile Nassogne<br>Alexis Wérion | FR [q1] [30h+5h] [4 Credits] |

### O Pathologie humaine

*Students from the master 60 who choose this option in Clinical biomedical sciences will be offered two other courses of human pathology in agreement with their program manager*

| | | | |
|---|---|---|---|
| O WMDS1330T | Pathologie générale - (partim théorie) | | FR [q2] [36h] [3 Credits] |
| O WFARM2104 | GOOD MANUFACTURING AND QUALITY | Thierry Pronce<br>Quentin Spillier (coord.) | FR [q2] [30h+15h] [3 Credits]<br>*> English-friendly* |

### O Méthodes pour les études cliniques

*L'étudiant inscrit au master 60 doit choisir en lieu et place du cours LSTAT2330 un cours sur la thématique du Développement durable et de la Transition, au choix ci-dessous*

| | | | |
|---|---|---|---|
| O WESP2123 | Principles of clinical trials | Diego Castanares Zapatero<br>Annie Robert (coord.)<br>Xavier Stephenne (compensates Françoise Smets) | FR [q1] [20h+10h] [4 Credits] |
| ⊠ LSTAT2330 | Statistics in clinical trials.<br>*Ce cours est obligatoire pour les étudiants inscrits au master 120.* | Catherine Legrand<br>Annie Robert | FR [q2] [22.5h+7.5h] [3 Credits] |
| ⊠ WFARM1375 | Drugs and sustainable development<br>*Ce cours ne peut être choisi que par les étudiants inscrits en master 60.* | Nathalie Delzenne (coord.)<br>Raphaël Frédérick<br>Pauline Modrie<br>Anne Spinewine<br>Sandy Tubeuf<br>Françoise Van Bambeke | FR [q2] [10h+20h] [3 Credits] |
| ⊠ LBIR2050A | Challenges of sustainable development and transition<br>*Ce cours ne peut être choisi que par les étudiants inscrits en master 60.* | Valentin Couvreur<br>Nathalie Delzenne<br>Valérie Swaen | FR [q1 or q2] [22.5h] [3 Credits] |

### ⊠ Autre activité

*Selon son projet, l'étudiant inscrit au Master 120 peut remplacer des activités obligatoires de l'option par le stage Work Placement*

## 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.

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|---|---|---|
| bachelor of Science in de fysica | | |
| **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 | Additional requirements for admission de max 60 crédits intégrés dans le programme du master |

## Non university Bachelors

> Find out more about links to the university

| Diploma | Access | Remarks |
|---|---|---|
| BA - sage-femme - crédits supplémentaires entre 15 et 30<br>BA - technologue de laboratoire médical - crédits supplémentaires entre 30 et 60<br>BA - technologue en imagerie médicale - crédits supplémentaires entre 30 et 60<br>BA de spécialisation en anesthésie - crédits supplémentaires entre 15 et 30<br>BA de spécialisation en soins intensifs et aide médicale urgente - crédits supplémentaires entre 15 et 30<br>BA en chimie, orientation biochimie - crédits supplémentaires entre 30 et 60<br>BA en chimie, orientation biotechnologie - crédits supplémentaires entre 30 et 60<br>BA en chimie, orientation chimie appliquée - crédits supplémentaires entre 30 et 60<br>BA en chimie, orientation environnement - crédits supplémentaires entre 30 et 60<br>BA en diététique - crédits supplémentaires entre 30 et 60<br>BA en ergothérapie - crédits supplémentaires entre 30 et 60<br>BA en soins infirmiers - crédits supplémentaires entre 30 et 60<br>BA en soins infirmiers pour titulaires d'un brevet d'infirmier hospitalier - crédits supplémentaires entre 30 et 60<br>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 | |
| Master [120] in Pharmacy | | Access based on application | |

## Holders of a non-University 2nd cycle degree

## 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

## Teaching method

The teaching methods used in the Master programme place the student in active learning situations with a balanced mix of group and individual work.

In addition, there will be a variety of different teaching methods : lectures, exercise sessions, problem solving activities, assignments to be done in individually or in small groups etc.

The dissertation, directed by a supervisor, enables students to acquire skills in the critical analysis of the literature.

## Evaluation

***The evaluation methods comply with the regulations concerning studies and exams. More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".***

For the theoretical courses, there are traditional written or oral examinations.

Fifteen credits are devoted to the dissertation : this is assessed on the basis of the submission of piece of written work which must be defended before a panel of experts.

## Mobility and/or Internationalisation outlook

Foreign students may join the 60 credit Master on the basis of prerequisite subjects approved by the programme committee.

## Possible trainings at the end of the programme

120 credit Masters :

By the end of this year of training, graduates of the 60 credit Master in Biomedical Sciences may move on to the teaching qualification for higher secondary education.

Links with teaching qualification (l'agrégation de l'enseignement secondaire supérieur - AESS) : the only university training directly accessible to holders of the 60 credit Master is the teaching qualification for higher secondary education (30 credits).

## Contacts

### Curriculum Management

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<br>1200 Woluwe-Saint-Lambert<br>Tel: +32 (0)2 764 73 62 - Fax: +32 (0)2 764 73 63 |

Other academic Supervisor(s)

- Charles De Smet

Jury

- Président du jury Master 60: Charles De Smet
- Secrétaire du jury Master 60: Laurent Gatto

Useful Contact(s)

- Conseiller aux études: Luc Bertrand
- Secrétariat de l'école des sciences biomédicales: 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