UCLouvain

SBIM1BA

2024 - 2025

Bachelor in Biomedicine

SBIM1BA - Introduction

Introduction

SBIM1BA - Teaching profile

Learning outcomes

Bachelor in Biomedicine students must endeavour to prepare themselves for the training offered in the various Master’s programmes taught by the School of Biomedical Sciences. To this end, students will apply themselves to acquiring the knowledge and skills that will enable them to become specialists in a field of biomedicine and play an integral part in a scientific project.

As part of the Bachelor in Biomedicine programme, students will study in detail the basic scientific foundations required to practise biomedicine and will discover a variety of specific areas of biomedical research. These activities will enable them to decide on their training projects for the Master's programme. In addition, practical lab work will enable Bachelor students to acquire the professional skills that they will develop during the Master's programme with increasing robustness and independence.

The objective of the School of Biomedical Sciences is to produce health sector professionals capable of conducting and interpreting scientific projects intended to improve the understanding, diagnosis and treatment of human diseases. In particular, the training is aimed at developing the skills required for the acquisition and analysis of observations and experiments in biomedicine, while at the same time cultivating scientific robustness and integrity.

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

1 Use the tools required to acquire integrated knowledge in biomedicine

The major is completed by a course equivalent to 30 credits, which may be an option selected from "the options menu" (more advanced studies in Biomedical Sciences) or a " minor " (an opening course in other disciplines). The course of 30 credits may be followed together with the specialised course.

Principal Subjects

The bachelor's studies enable the student to apprehend the world of the living, from a single atom to the whole of society .

A toms, molecules and the systems which govern them :
General and Organic Chemistry - Biochemistry - Applied Physics - Pharmacology and Pharmacokinetics - Mathematics.

From a single cell to a human being
Morphological and Functional Approach : General Cellular and Molecular Biology, - Cytology and Histology- Anatomy - Embryology - Immunology - Physiology - Microbiology - General Pathology.

Man and society
Contextual Approach : Philosophy - Psychology.

Research experience
Statistics - Strategies and applied models - Genetic Engineering - Instrumental Analysis.

Other studies
English

			Year 1 2 3
WSBIM1313	Experimental design in biomedical sciences	Luc Bertrand Charles De Smet Pascal Kienlen-Campard (coord.)	FR [q2] [40h] [4 Credits] *> English-friendly*

Year
1 2 3

Course prerequisites

The **table** below lists the activities (course units, or CUs) for which there are one or more prerequisites within the programme, i.e. the

WMDS1231 "Biochimie humaine pathologique" has prerequisite(s) WFARM1213S AND WFARM1221S AND WSBIM1227 AND WFARM1282 AND WFARM1247 AND WSBIM1201T AND WSBIM1201P

- WFARM1213S - Human physiology and basics of physiopathology - (Partim SBIM)
- WFARM1221S - Biochemistry and molecular biology
- WSBIM1227 - Molecular biology and integrated biochemistry
- WFARM1282 - General microbiology
- WFARM1247 - Statistical data processing
- WSBIM1201T - General physiology - General physiology (theory part, 40h)
- WSBIM1201P - General physiology - General physiology (practical part, 25h)

WPHAR1300 "Pharmacology Part 1" has prerequisite(s) WFARM1213S AND WSBIM1201T AND WSBIM1201P

- WFARM1213S - Human physiology and basics of physiopathology - (Partim SBIM)
- WSBIM1201T - General physiology - General physiology (theory part, 40h)
- WSBIM1201P - General physiology - General physiology (practical part, 25h)

WSBIM1200 "Biomedical instrumental analysis and radiation protection" has prerequisite(s) WSBIM1001 AND WMD1105 AND WMD1106

- WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
- WMD1105 - Chimie générale et minérale
- WMD1106 - ORGANIC CHEMISTRY

WSBIM1201P "General physiology - General physiology (practical part, 25h)" has prerequisite(s) WMD1102 AND WMD1104

- WMD1102 - Physique expérimentale et introduction mathématique aux sciences expérimentales (1e partie)
- WMD1104 - Physique expérimentale et introduction mathématique aux sciences expérimentales (2e partie)

WSBIM1201T "General physiology - General physiology (theory part, 40h)" has prerequisite(s) WMD1120 AND WMD1006 AND WMD1102 AND WMD1104

- WMD1120 - General biology and an experimental approach to biology
- WMD1006 - Cytology and general histology
- WMD1102 - Physique expérimentale et introduction mathématique aux sciences expérimentales (1e partie)
- WMD1104 - Physique expérimentale et introduction mathématique aux sciences expérimentales (2e partie)

WSBIM1203 "Special histology and hematology" has prerequisite(s) WFARM1009 AND WMD1006

- WFARM1009 - Elements of general and functional anatomy
- WMD1006 - Cytology and general histology

WSBIM1205 "Introduction to toxicology" has prerequisite(s) WMD1105 AND WMD1106

- WMD1105 - Chimie générale et minérale
- WMD1106 - ORGANIC CHEMISTRY

WSBIM1206 "From nutrient to food" has prerequisite(s) WFARM1009 AND WMD1105 AND WMD1106

- WFARM1009 - Elements of general and functional anatomy
- WMD1105 - Chimie générale et minérale
- WMD1106 - ORGANIC CHEMISTRY

WSBIM1207 "Introduction to bioinformatics" has prerequisite(s) WMD1102 AND WSBIM1001 AND LANGL1854

- WMD1102 - Physique expérimentale et introduction mathématique aux sciences expérimentales (1e partie)
- WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
- LANGL1854 - Medical English

WSBIM1211 "Methodolgy of cell and molecular biology" has prerequisite(s) WMD1120 AND WMD1006 AND WSBIM1001 AND WMD1105

- WMD1120 - General biology and an experimental approach to biology
- WMD1006 - Cytology and general histology
- WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
- WMD1105 - Chimie générale et minérale

WSBIM1220 "Neurobiology" has prerequisite(s) WFARM1009

- WFARM1009 - Elements of general and functional anatomy

WSBIM1226 "Molecular biology (including epigenetics) and tutorials" has prerequisite(s) WMD1120 AND WMD1106

- WMD1120 - General biology and an experimental approach to biology
- WMD1106 - ORGANIC CHEMISTRY

WSBIM1227 "Molecular biology and integrated biochemistry"

• WSBIM1206 - From nutrient to food

WSBIM1306 "Histology and pathological anatomy workshop" has prerequisite(s) WFARM1213S ANDganatomy workshop"

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.

Detailed programme per annual block

SBIM1BA - 1ST ANNUAL UNIT

- 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...)

Majeure

Des atomes, des molécules et des systèmes qui les régissent

WMD1102	Physique expérimentale et introduction mathématique aux sciences expérimentales (1e partie)	Alexandre Lazarescu (compensates Eduardo Cortina Gil) Fabio Maltoni	[FR] [q1] [60h +21h] [8 Credits]
WMD1104	Physique expérimentale et introduction mathématique aux sciences expérimentales (2e partie)	Bryan Debin	[FR] [q2] [30h +21h] [5 Credits]
WSBIM1001	MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES	Pierre Bieliavsky Annie Robert	[FR] [q2] [45h +20h] [5 Credits]
WMD1105	Chimie générale et minérale	Olivier Riant Alexandru Vlad	[FR] [q1] [60h +30h] [9 Credits]
WMD1106	ORGANIC CHEMISTRY	Mohamed Ayadim Olivier Riant Michael Singleton	[FR] [q2] [60h +30h] [9 Credits]

De la cellule à l'être humain

WMD1120	General biology and an experimental approach to biology	Marie Boucquey Charles De Smet Jean Baptiste Demoulin (coord.) Pascal Kienlen-Campard	[FR] [q1] [75h +25h] [10 Credits]
WMD1006	Cytology and general histology	Christophe Pierreux	[FR] [q2] [10h +40h] [5 Credits]
WFARM1009	Elements of general and functional anatomy	Christine Galant (coord.) Catherine Hubert Alain Poncelet	[FR] [q2] [30h] [3 Credits]

L'homme et la société : approche contextuelle

WFARM1160	Philosophy	Nathalie Grandjean	[FR] [q1] [30h] [3 Credits]

SBIM1BA - 2ND ANNUAL UNIT

- 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

LANGL1855	Medical English	Timothy Byrne (coord.) Aurélie Deneumoustier Carlo Lefevre (coord.)	EN [q1 or q2] [30h] [3 Credits]

⊠ Additionnal module in Biomedical Sciences

Programme pour les étudiants qui ont choisit l'approfondissement en sciences biomédicales

Deuxième bloc annuel de bachelier

L'étudiant est tenu de suivre les cours suivants :

WSBIM1205	Introduction to toxicology	Lidvine Boland Nathalie Delzenne Laure Elens Vincent Haufroid François Huaux Violaine Verougstraete Alexis Wérion	FR [q2] [30h] [3 Credits]
WSBIM1211	Methodolgy of cell and molecular biology	Guido Bommer Jean-François Collet (coord.) Stefan Constantinescu Donatienne Tyteca	FR [q2] [22.5h] [3 Credits]

SBIM1BA - 3RD ANNUAL UNIT

- 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...)

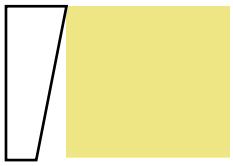
Majeure

Des atomes, des molécules et des systèmes qui les régissent

WPHAR1300	Pharmacology Part 1	Emmanuel Hermans Joseph Lorent	FR [q1] [30h +7.5h] [3 Credits] *> English-friendly*

De la cellule à l'être humain

WSBIM1310	Human embryology		



- For any secondary school diploma **from a European Union country**, the admission request must contain the equivalence of your diploma or, at the very least, proof of the filing of the equivalence request with the Wallonia-Brussels Federation (French Community of Belgium). For any information relating to obtaining an equivalence, please refer to the following site.
- For any secondary school diploma **from a country outside the European Union**, the admission application must contain the equivalence of your diploma issued by the Wallonia-Brussels Federation (French Community of Belgium). If you have a restrictive equivalence for the programme of your choice, in addition of it, you **must** have either the DAES or a certificate of successful completion of the examination giving access to 1st cycle studies when you submit your application

Access based on validation of professional experience

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.

Special requirements to access some programmes

- 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 medecine 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** or a **Bachelor's degree in dental science** must first sit an aptitude test (fr).
- Access to **Bachelor of Science in Business Engineering**

  The Bachelor of Science in Business Engineering is a joint program organised by KU Leuven and UCLouvain Saint-Louis Bruxelles. In order to register, all candidate must first submit an application via the KU Leuven admission platform. The conditions of access to this programme are specific.

Teaching method

Throughout the Bachelor in Biomedicine programme, students encounter a variety of teaching methods: classroom lectures, tutoring, mentoring and practical laboratory work.

The substantial amount of laboratory work was introduced to enable learning in research through experimentation. It is also identified in the programme in relation to classroom lectures.

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".

The educational activities are evaluated by written or oral exams, according to the rules in force at the University (see Exam Regulations). Examination sessions are organised on completion of training periods (January, June) and in September. The practical work is subject to ongoing assessment.

To obtain the average, the marks obtained for the teaching units are weighted by their respective credits.

Mobility and/or Internationalisation outlook

Aucune mobilité dâ€™étudiant nâ€™est prévue au cours du 1er cycle des études de sciences biomédicales.

Possible trainings at the end of the programme

Positioning of the programme within the University cursus

The bachelor's degree entitles access to the master's of Biomedical Sciences (60 crédits).

The bachelor's degree entitles access to the master's of Biomedical Sciences (120 crédits) which comprises four sections : Applied Biomedical Sciences, Clinical Biomedical Sciences, Human Nutrition and Toxicology.

Furthermore, there is sufficient homogeneity within the programmes offered by the different schools of the Faculty of Medecine (MED, FARM, DENT, SBIM, IEPR) to make re-orientation possible during the bachelor's studies by means of additional complementary courses.

Other studies accessible upon completion of the programme

Other masters offered by the Faculty of Medecine, as well as certain programmes in the Faculty of Sciences, may be accessible, subject to certain prerequisites.

The student also has direct access to master's degrees in other disciplines such as the master's degree (120) in population and development sciences.

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 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 de cycle de bachelier (y compris la première): Pascal Kienlen-Campard
- Secrétaire de jury de cycle de bachelier (y compris la première): Christophe Pierreux

Useful Contact(s)

- Personne de contact de la 1re année de bachelier: Fabienne Titeux
- Personne de contact du cycle de bachelier (hors première): Guillaume Arnould
- Président de la commission d'enseignement de l'école de sciences biomédicales: Charles De Smet
- Conseiller aux études: Laure Dumoutier
- Responsable administrative de la faculté de pharmacie et de sciences biomédicales: Johanne Garny