UCLouvain

SBIM1BA

2026 - 2027

Bachelor in Biomedicine

At Bruxelles Woluwe - 180 credits - 3 years - Day schedule - In French
Dissertation/Graduation Project : **NO** - 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: **SBIM1BA** - Francophone Certification Framework: 6

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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

1.a Incorporate the general knowledge and methodologies in experimental biomedicine: biochemistry and molecular biology; cellular biology, general and special histology, general anatomy; general and special physiology; principal pathologies and their multifactorial pathogenesis, genetic diseases as experiments by nature; the major principles of pharmacology.
1.b Describe the experimental approaches and observation methods that resulted in this knowledge base.
1.c Use modern knowledge sources to effectively research pertinent, new and specific information.

2 Master the culture of numbers and representations

2.a Understand units and deal with orders of magnitude; use the standardisations and tests limiting the dispersion of experimental measurements; use reasoning and statistical tools; use forms of graphical representation.
2.b Understand the functions and rules of modern mathematical modelling; understand the mathematical translation of the major laws of physics, chemistry and biology (speed and constants, flux, interactions and affinity); identify the crucial limiting parameters.
2.c Display command of the IT tools that assist analysis and calculation.

3 Conduct biomedical experiments

3.a Formulate a biomedical problem, translate it into a scientific question and determine an experimental strategy to deal with it.
3.b Execute the successive steps of an experimental protocol:

i.e.:

- understand and accurately describe them, so that they may be reproduced by another scientist.

3.c Conduct experiments:

i.e.:

- manipulate biological and chemical equipment, demonstrating manual dexterity and observing laboratory best practices, including safety and waste management standards;
- use measuring and imaging instruments appropriately, as well as the IT tools associated with them;
- ensure effective reproducibility through accurate and thorough know-how.

4 Analyse, write and evaluate data from biomedical experiments

4.a Robustly analyse the observations in order to draw interpretations from them; identify analogical and deductive reasonings; identify correlation and causality.
4.b On the basis of the above reasonings, present a detailed argument of the results by comparing them with the bibliographical data (critical analysis).
4.c Recognise the failures and identify their causes.

5 Present scientific observations clearly, verbally and in writing

5.a Understand and employ a precise and specific biomedical vocabulary adapted to the applications of biomedicine.
5.b Draft a precise protocol, note the observations in detail in a laboratory notebook, write a clear, informative and exhaustive report on a series of observations or experiments.
5.c Use the rules enabling effective verbal communication of projects, published data or the results of experiments.
5.d Demonstrate the internal consistency of the results and incorporate them into the published knowledge bases.

Programme structure

General presentation of the programme

The bachelor's of Biomedical Sciences totals 180 credits.

The " major " of the programme consists of a basic course of 60 credits (1st year) and a specialised training course (2nd and 3rd year) of at least 90 credits.

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

SBIM1BA Programme

Detailed programme by subject

- Mandatory
- Optional
- Not offered in 2026-2027
- Not offered in 2026-2027 but offered the following year
- Offered in 2026-2027 but not the following year
- Not offered in 2026-2027 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 (150 credits)

Des atomes, des molécules et des systèmes qui les régissent

				Year 1	2	3
WSBIM1100	Experimental Physics and Mathematical Introduction to Experimental Sciences (Part 1)	Giacomo Bruno Eduardo Cortina Gil	[FR] [q1] [60h+21h] [8 Credits]	x		
WSBIM1101	Experimental Physics and Mathematical Introduction to Experimental Sciences (Part 2)		[FR] [q2] [30h+21h] [5 Credits]	x		
WSBIM1001	MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES	Pierre Bieliavsky	[FR] [q2] [45h+20h] [5 Credits]	x		
WFASB1100	General Chemistry		[FR] [q1] [60h+26h] [8 Credits]	x		
WFASB1101	Organic Chemistry Applied to Pharmaceutical and Biomedical Sciences	Raphaël Frédérick Olivier Riant	[FR] [q2] [60h+30h] [9 Credits]	x		
WFARM1221S	Biochemistry and molecular biology		[FR] [q1] [50h+10h] [6 Credits]		x	
WSBIM1301	Pharmacology Part 1	Emmanuel Hermans (coord.)	[FR] [q1] [30h+7.5h] [3 Credits]			x

De la cellule à l'être humain

				Year 1	2	3
WFASB1102	Biology	Charles De Smet Jean Baptiste Demoulin Pascal Kienlen-Campard	FR [q1] [60h+10h] [8 Credits]	x		
WSBIM1102	Evolutionary and experimental Biology	Pascal Kienlen-Campard	FR [q1] [20h] [3 Credits]	x		
WSBIM1226	Molecular biology (including epigenetics) and tutorials	Charles De Smet Frédéric Lemaigre Thomas Michiels (coord.)	FR [q1] [30h+10h] [3 Credits]		x	
WSBIM1227	Molecular biology and integrated biochemistry	Luc Bertrand	FR [q2] [20h+30h] [3 Credits]		x	
WMDS1230	Biologie cellulaire médicale et expérimentale	Stefan Constantinescu (coord.) Christophe Pierreux Donatienne Tyteca	FR [q1] [30h+20h] [4 Credits]		x	
WSBIM1310	Human embryology	Charles De Smet (coord.) Christophe Pierreux	FR [q2] [24h] [2 Credits]			x
WSBIM1201	General physiology - General physiology		FR [q1] [40h+25h] [6 Credits]		x	
WSBIM1203	Special histology and hematology	Christophe Pierreux (coord.) Mieke Van Bockstal	FR [q1] [15h+15h] [3 Credits]		x	
WSBIM1306	Histology and pathological anatomy workshop	Yves Guiot Christophe Pierreux (coord.) Mieke Van Bockstal	FR [q2] [30h] [2 Credits]			x
WFARM1282	General microbiology	Thomas Michiels	FR [q1] [20h+15h] [3 Credits]		x	
WSBIM1200	Biomedical instrumental analysis and radiation protection	Giulio Muccioli	FR [q1] [30h+30h] [4 Credits] *> English-friendly*		x	
WFARM1213S	Human physiology and basics of physiopathology - (Partim SBIM)		FR [q2] [50h] [5 Credits] *> English-friendly*		x	
WMDS1256S	Pathologie biochimique et moléculaire - (partim SBIM)		FR [q2] [30h] [3 Credits]			x
WMDS1229	Génétique humaine	Miikka Vikkula	FR [q2] [20h] [2 Credits] *> English-friendly*			x
WSBIM1334	general immunology	Isabelle Leclercq Sophie Lucas (coord.) Jean-Christophe Renauld	FR [q1] [65h] [6 Credits] *> English-friendly*			x
WSBIM1382	Genetics and applied biotechnology	Luc Bertrand (coord.) Laure Dumoutier Géraldine Laloux Nisha Limaye	FR [q1] [30h] [3 Credits] *> English-friendly*			x
WSBIM1302	Molecular Virology	Thomas Michiels	FR [q1] [25h] [3 Credits]			x
WFARM1305	Elements of General Pathology	Mélanie Dechamps Olivier Feron (coord.)	FR [q2] [30h] [3 Credits] *> English-friendly*			x
WSBIM1313	Experimental design in biomedical sciences	Luc Bertrand Charles De Smet Pascal Kienlen-Campard (coord.)	FR [q2] [40h] [4 Credits] *> English-friendly*			x
WSBIM1335	Introduction to pathophysiology	Christiani Andrade Amorim Antoine Froidure Jean-Christophe Jonas (coord.) Shakeel Kautbally	FR [q2] [30h] [3 Credits]			x
WSBIM1293	Training course in cell biology	Laure Dumoutier (coord.) Julie Stockis	FR [q2] [30h] [2 Credits]		x	
WSBIM1103	Cytology and general Histology	Christophe Pierreux	FR [q2] [10h+40h] [6 Credits]	x		
WSBIM1104	Elements of general and functional Anatomy	Christine Galant	FR [q2] [30h] [3 Credits]	x		

L'homme et la société : approche contextuelle

				Year 1	2	3
WFARM1247	Statistical data processing	Eugen Pircalabelu	FR [q2] [15h+15h] [3 Credits]		x	
WFARM1202	Eléments d'épidémiologie appliquée aux sciences pharmaceutiques et biomédicales	Séverine Henrard	FR [q2] [20h] [2 Credits] *> English-friendly*			x
WFARM2177	Biostatistics	Laure Elens	FR [q2] [20h+10h] [3 Credits]			x
LANGL1854	Medical English *Les étudiant.es inscrits en bachelier en sciences biomédicales doivent suivre le cours au Q2*	Stéphanie Brabant Aurélie Deneumoustier Ariane Halleux Carlo Lefevre (coord.) Mark Theodore Pertuit	EN [q1 or q2] [30h] [3 Credits]	x		
LANGL1855	Medical English	Timothy Byrne (coord.) Aurélie Deneumoustier Carlo Lefevre (coord.)	EN [q1 or q2] [30h] [3 Credits]		x	
LANGL2454	English for biomedical students	Nicholas Gibbs Nevin Serbest (coord.)	EN [q2] [30h] [3 Credits]			x
WFASB1103	Philosophy – foundations of science		FR [q1] [15h] [2 Credits]	x		

Stage en laboratoire (3 credits)

WSBIM1393	Laboratory training	Pascal Kienlen-Campard	FR [q1 or q2] [15h+15h] [3 Credits]			x

Additionnal module in Biomedical Sciences (30 credits)

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 (coord.) Violaine Verougstraete Alexis Wérion	FR [q2] [30h] [3 Credits]		x	
WSBIM1211	Methodolgy of cell and molecular biology	Guido Bommer Jean-François Collet (coord.) Stefan Constantinescu Pauline Leverrier Donatienne Tyteca	FR [q2] [22.5h] [3 Credits]		x	
WSBIM1206	From nutrient to food	Patrice Cani	FR [q1] [30h] [3 Credits] *> English-friendly*		x	
WSBIM1220	Neurobiology	Emmanuel Hermans (coord.) Pascal Kienlen-Campard Marcus Missal	FR [q2] [30h] [3 Credits] *> English-friendly*		x	
WSBIM1207	Introduction to bioinformatics	Laurent Gatto	FR [q2] [15h+20h] [3 Credits]		x	

Troisième bloc annuel de bachelier

L'étudiant est tenu de suivre les cours suivants :

WFARM2139T	Pharmacocinetic, genomics and toxicology (toxicology part)		FR [q1] [22h] [3 Credits] *> English-friendly*			x
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]			x
WSBIM1305	Introduction to human nutrition	Patrice Cani Nathalie Delzenne (coord.) Françoise Smets	FR [q1] [30h] [3 Credits]			x
WSBIM1323	Systemic neuroscience	Philippe Gailly Pascal Kienlen-Campard Marcus Missal (coord.)	FR [q1] [30h] [3 Credits]			x
WSBIM1322	Bioinformatics	Laurent Gatto	FR [q1] [30h+10h] [3 Credits]			x

Year
1 2 3

⊠ Minor or additional module (30 credits)

L'étudiant qui ne choisit pas l'approfondissement en sciences biomédicales, choisit une mineure d'ouverture proposée par d'autres programmes, à raison de 15 crédits en BAC2 et 15 crédits en BAC3.
Maximum 1 element(s)

List of available minors

During the bachelor's of Biomedical Sciences, personally selected options will give the student the opportunity to become more familiar with the different branches available at master's level.

Instead of the options, the bachelor's may also include a "minor" which will enable the student to open up new horizons.

> Minor in Law (access) *[en-prog-2026-minadroi]*
> Minor in Antiquity: Egypt, Eastern World, Greece, Rome *[en-prog-2026-minanti]*
> Minor in History of Art and Archeology *[en-prog-2026-minarke]*
> Minor in Chinese studies *[en-prog-2026-minchin]*
> Minor in Information and Communication *[en-prog-2026-mincomu]*
> Minor in Criminology *[en-prog-2026-mincrim]*
> Minor in Culture and Creation *[en-prog-2026-mincucrea]*
> Minor in Scientific Culture *[en-prog-2026-mincults]*
> Minor in Development and Environment *[en-prog-2026-mindenv]*
> Minor : Issues of Transition and Sustainable Development (*) *[en-prog-2026-mindd]*
> Minor in Economics *[en-prog-2026-minecon]*
> Minor in European Studies *[en-prog-2026-mineuro]*
> Minor in Gender Studies *[en-prog-2026-mingenre]*
> Minor in Mangement (basic knowledge) *[en-prog-2026-minogest]*
> Minor in History *[en-prog-2026-minhist]*
> Minor in Human and Social Sciences *[en-prog-2026-minhuso]*
> Minor in Arabic language and Islamic civilization *[en-prog-2026-minislam]*
> Minor in Philosophy *[en-prog-2026-minfilo]*
> Minor in Medieval Studies *[en-prog-2026-minmedi]*
> Minor in Musicology *[en-prog-2026-minmusi]*
> Minor in Law (openness) *[en-prog-2026-minodroi]*
> Minor in Economics (open) *[en-prog-2026-minoeco]*
> Minor in Sciences of Religions (openness) - (only available for reenrolment) *[en-prog-2026-minreli]*
> Minor in Sociology and Anthropology *[en-prog-2026-minsoca]*
> Minor in Population and Development Studies *[en-prog-2026-minsped]*
> Minor in Political Sciences *[en-prog-2026-minspol]*
> Minor in Statistics, Actuarial Sciences and Data Sciences *[en-prog-2026-minstat]*
> Minor in numerical technologies and society *[en-prog-2026-minstic]*
> Minor in Christian Theology *[en-prog-2026-mintheo]*
> Minor in Medication Sciences *[en-prog-2026-minfarm]*
> Additionnal module in Biomedical Sciences *[en-prog-2026-appsbim]*
> Minor in Literary Studies *[en-prog-2026-minlitter]*
> Minor in Linguistics *[en-prog-2026-minlingui]*

(*) This programme is the subject of access criteria

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 programme CU for which the learning outcomes must be certified and the corresponding credits awarded by the jury before registering for that CU.

These activities are also identified **in the detailed programme**: their title is followed by a yellow square.

Prerequisites and student's annual programme

As the prerequisite is for CU registration puposes only, there are no prerequisites within a programme year. Prerequisites are defined between CUs of different years and therefore influence the order in which the student will be able to register for the programme's CUs.

In addition, when the jury validates a student's individual programme at the beginning of the year, it ensures its coherence, meaning that it may:

- require the student to combine registration in two separate CUs which it considers necessary from a pedagogical point of view.
- transform a prerequisite into a corequisite if the student is in the final year of a degree course.

For more information, please consult the Academic Regulations and Procedures.

 # Prerequisities list

LANGL1855 "Anglais médical" has prerequisite(s) LANGL1854

- LANGL1854 - Medical English

LANGL2454 "Anglais pour étudiants en sciences biomédicales" has prerequisite(s) LANGL1855

- LANGL1855 - Medical English

WFARM1202 "Eléments d'épidémiologie appliquée aux sciences pharmaceutiques et biomédicales" has prerequisite(s) WFARM1247 ET WSBIM1207 ET LANGL1855

- WFARM1247 - Statistical data processing
- WSBIM1207 - Introduction to bioinformatics
- LANGL1855 - Medical English

WFARM1213S "Physiologie des systèmes et éléments de physiopathologie - (partim SBIM)" has prerequisite(s) WFASB1102 ET WSBIM1104 ET WSBIM1103

- WFASB1102 - Biology
- WSBIM1104 - Elements of general and functional Anatomy
- WSBIM1103 - Cytology and general Histology

WFARM1221S "Biochimie et biologie moléculaire (partim biochimie)" has prerequisite(s) WFASB1102 ET WFASB1101

- WFASB1102 - Biology
- WFASB1101 - Organic Chemistry Applied to Pharmaceutical and Biomedical Sciences

WFARM1247 "Traitement statistique des données" has prerequisite(s) LANGL1854

- LANGL1854 - Medical English

WFARM1282 "Microbiologie générale" has prerequisite(s) WSBIM1102

- WSBIM1102 - Evolutionary and experimental Biology

WFARM1305 "Eléments de pathologie humaine" has prerequisite(s) WFARM1213S ET WSBIM1203

- WFARM1213S - Human physiology and basics of physiopathology - (Partim SBIM)
- WSBIM1203 - Special histology and hematology

WFARM2139T "Pharmacocinétique, pharmacogénomique et toxicologie (partim toxicologie, 22h)" has prerequisite(s) WFARM1221S ET WSBIM1201 ET WSBIM1205

- WFARM1221S - Biochemistry and molecular biology
- WSBIM1201 - General physiology - General physiology
- WSBIM1205 - Introduction to toxicology

WFARM2177 "Biostatistique" has prerequisite(s) WFARM1247

- WFARM1247 - Statistical data processing

WMDS1229 "Génétique humaine" has prerequisite(s) WSBIM1226 ET WFARM1247

- WSBIM1226 - Molecular biology (including epigenetics) and tutorials
- WFARM1247 - Statistical data processing

WMDS1230 "Biologie cellulaire médicale et expérimentale" has prerequisite(s) WFASB1102 ET WSBIM1103

- WFASB1102 - Biology
- WSBIM1103 - Cytology and general Histology

WMDS1256S "Pathologie biochimique et moléculaire - (partim SBIM)" has prerequisite(s) WFARM1213S ET WSBIM1201 ET WFARM1221S

- WFARM1213S - Human physiology and basics of physiopathology - (Partim SBIM)
- WSBIM1201 - General physiology - General physiology
- WFARM1221S - Biochemistry and molecular biology

WSBIM1200 "Analyse instrumentale biomédicale et radioprotection" has prerequisite(s) WSBIM1001 ET WFASB1100 ET WFASB1101

- WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES

- WFASB1100 - General Chemistry
- WFASB1101 - Organic Chemistry Applied to Pharmaceutical and Biomedical Sciences

WSBIM1201 "Physiologie générale" has prerequisite(s) WFASB1102 ET WSBIM1103 ET WSBIM1100 ET WSBIM1101

- WFASB1102 - Biology
- WSBIM1103 - Cytology and general Histology
- WSBIM1100 - Experimental Physics and Mathematical Introduction to Experimental Sciences (Part 1)
- WSBIM1101 - Experimental Physics and Mathematical Introduction to Experimental Sciences (Part 2)

WSBIM1203 "Histologie spéciale et hématologie" has prerequisite(s) WSBIM1104 ET WSBIM1103

- WSBIM1104 - Elements of general and functional Anatomy
- WSBIM1103 - Cytology and general Histology

WSBIM1205 "Introduction à la toxicologie" has prerequisite(s) WFASB1100 ET WFASB1101

- WFASB1100 - General Chemistry
- WFASB1101 - Organic Chemistry Applied to Pharmaceutical and Biomedical Sciences

WSBIM1206 "Du nutriment à l'aliment" has prerequisite(s) WSBIM1104 ET WFASB1100

- WSBIM1104 - Elements of general and functional Anatomy
- WFASB1100 - General Chemistry

WSBIM1207 "Introduction à la bio-informatique" has prerequisite(s) WSBIM1100 ET WSBIM1001 ET LANGL1854

- WSBIM1100 - Experimental Physics and Mathematical Introduction to Experimental Sciences (Part 1)
- WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
- LANGL1854 - Medical English

WSBIM1211 "Méthodologie de la biologie cellulaire et moléculaire" has prerequisite(s) WFASB1102 ET WSBIM1103 ET WFASB1100 ET WSBIM1102

- WFASB1102 - Biology
- WSBIM1103 - Cytology and general Histology
- WFASB1100 - General Chemistry
- WSBIM1102 - Evolutionary and experimental Biology

WSBIM1220 "Neurobiologie" has prerequisite(s) WSBIM1104

- WSBIM1104 - Elements of general and functional Anatomy

WSBIM1226 "Biologie moléculaire (dont l'épigénétique) et travaux dirigés" has prerequisite(s) WFASB1102

- WFASB1102 - Biology

WSBIM1227 "Biologie moléculaire et biochimie intégrée" has prerequisite(s) WSBIM1001 ET WFASB1101 ET WSBIM1102

- WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
- WFASB1101 - Organic Chemistry Applied to Pharmaceutical and Biomedical Sciences
- WSBIM1102 - Evolutionary and experimental Biology

WSBIM1293 "Stage de biologie cellulaire" has prerequisite(s) WFASB1102 ET WSBIM1103 ET WSBIM1101 ET WSBIM1001

- WFASB1102 - Biology
- WSBIM1103 - Cytology and general Histology
- WSBIM1101 - Experimental Physics and Mathematical Introduction to Experimental Sciences (Part 2)
- WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES

WSBIM1301 "Pharmacologie 1re partie" has prerequisite(s) WFARM1213S ET WSBIM1201

- WFARM1213S - Human physiology and basics of physiopathology - (Partim SBIM)
- WSBIM1201 - General physiology - General physiology

WSBIM1302 "Virologie moléculaire" has prerequisite(s) WSBIM1227 ET WFARM1282

- WSBIM1227 - Molecular biology and integrated biochemistry
- WFARM1282 - General microbiology

WSBIM1305 "Introduction à la nutrition humaine" has prerequisite(s) WFARM1221S ET WSBIM1206

- WFARM1221S - Biochemistry and molecular biology
- WSBIM1206 - From nutrient to food

WSBIM1306 "Atelier d'histologie et d'anatomie pathologique" has prerequisite(s) WFARM1213S ET WSBIM1203

- WFARM1213S - Human physiology and basics of physiopathology - (Partim SBIM)
- WSBIM1203 - Special histology and hematology

WSBIM1310 "Embryologie" has prerequisite(s) WMDS1230

- WMDS1230 - Biologie cellulaire médicale et expérimentale

WSBIM1313 "Design expérimental en sciences biomédicales" has prerequisite(s) WFARM1221S ET WSBIM1226 ET WMDS1230 ET WSBIM1293 ET WFARM1282 ET WSBIM1201

- WFARM1221S - Biochemistry and molecular biology
- WSBIM1226 - Molecular biology (including epigenetics) and tutorials
- WMDS1230 - Biologie cellulaire médicale et expérimentale
- WSBIM1293 - Training course in cell biology
- WFARM1282 - General microbiology
- WSBIM1201 - General physiology - General physiology

WSBIM1320 "Introduction aux approches expérimentales de la biologie cellulaire et moléculaire" has prerequisite(s) WSBIM1226 ET WMDS1230 ET WSBIM1211 ET LANGL1855 ET WSBIM1200

- WSBIM1226 - Molecular biology (including epigenetics) and tutorials

- WMDS1230 - Biologie cellulaire médicale et expérimentale
- WSBIM1211 - Methodolgy of cell and molecular biology
- LANGL1855 - Medical English
- WSBIM1200 - Biomedical instrumental analysis and radiation protection

WSBIM1322 "Bioinformatique" has prerequisite(s) WFARM1247 ET WSBIM1207 ET LANGL1855

- WFARM1247 - Statistical data processing
- WSBIM1207 - Introduction to bioinformatics
- LANGL1855 - Medical English

WSBIM1323 "Neurosciences systémiques" has prerequisite(s) WSBIM1201 ET WSBIM1220

- WSBIM1201 - General physiology - General physiology
- WSBIM1220 - Neurobiology

WSBIM1334 "Immunologie générale" has prerequisite(s) WFARM1282

- WFARM1282 - General microbiology

WSBIM1335 "Introduction à la physiopathologie" has prerequisite(s) WSBIM1201 ET WFARM1213S

- WSBIM1201 - General physiology - General physiology
- WFARM1213S - Human physiology and basics of physiopathology - (Partim SBIM)

WSBIM1382 "Génétique et biotechnologie appliquée" has prerequisite(s) WFARM1221S ET WSBIM1226 ET WSBIM1227 ET WFARM1282

- WFARM1221S - Biochemistry and molecular biology
- WSBIM1226 - Molecular biology (including epigenetics) and tutorials
- WSBIM1227 - Molecular biology and integrated biochemistry
- WFARM1282 - General microbiology

WSBIM1393 "Stage d'immersion" has prerequisite(s) WFARM1213S ET WFARM1221S ET WSBIM1226 ET WSBIM1227 ET WMDS1230 ET WSBIM1293 ET WSBIM1211 ET WSBIM1200

- WFARM1213S - Human physiology and basics of physiopathology - (Partim SBIM)
- WFARM1221S - Biochemistry and molecular biology
- WSBIM1226 - Molecular biology (including epigenetics) and tutorials
- WSBIM1227 - Molecular biology and integrated biochemistry
- WMDS1230 - Biologie cellulaire médicale et expérimentale
- WSBIM1293 - Training course in cell biology
- WSBIM1211 - Methodolgy of cell and molecular biology
- WSBIM1200 - Biomedical instrumental analysis and radiation protection

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

O Mandatory
Optional
△ Not offered in 2026-2027
⊘ Not offered in 2026-2027 but offered the following year
⊕ Offered in 2026-2027 but not the following year
△ ⊕ Not offered in 2026-2027 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

WSBIM1100	Experimental Physics and Mathematical Introduction to Experimental Sciences (Part 1)	Giacomo Bruno Eduardo Cortina Gil	FR [q1] [60h +21h] [8 Credits]
WSBIM1101	Experimental Physics and Mathematical Introduction to Experimental Sciences (Part 2)		FR [q2] [30h +21h] [5 Credits]
WSBIM1001	MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES	Pierre Bieliavsky	FR [q2] [45h +20h] [5 Credits]
WFASB1100	General Chemistry		FR [q1] [60h +26h] [8 Credits]
WFASB1101	Organic Chemistry Applied to Pharmaceutical and Biomedical Sciences	Raphaël Frédérick Olivier Riant	FR [q2] [60h +30h] [9 Credits]

De la cellule à l'être humain

WFASB1102	Biology	Charles De Smet Jean Baptiste Demoulin Pascal Kienlen-Campard	FR [q1] [60h +10h] [8 Credits]
WSBIM1102	Evolutionary and experimental Biology	Pascal Kienlen-Campard	FR [q1] [20h] [3 Credits]
WSBIM1103	Cytology and general Histology	Christophe Pierreux	FR [q2] [10h +40h] [6 Credits]
WSBIM1104	Elements of general and functional Anatomy	Christine Galant	FR [q2] [30h] [3 Credits]

L'homme et la société : approche contextuelle

LANGL1854	Medical English *Les étudiant.es inscrits en bachelier en sciences biomédicales doivent suivre le cours au Q2*	Stéphanie Brabant Aurélie Deneumoustier Ariane Halleux Carlo Lefevre (coord.) Mark Theodore Pertuit	EN [q1 or q2] [30h] [3 Credits]
WFASB1103	Philosophy – foundations of science		FR [q1] [15h] [2 Credits]

SBIM1BA - 2ND ANNUAL UNIT

- Mandatory
- Optional
- Not offered in 2026-2027
- Not offered in 2026-2027 but offered the following year
- Offered in 2026-2027 but not the following year
- Not offered in 2026-2027 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

WFARM1221S	Biochemistry and molecular biology		FR [q1] [50h +10h] [6 Credits]

De la cellule à l'être humain

WSBIM1226	Molecular biology (including epigenetics) and tutorials	Charles De Smet Frédéric Lemaigre Thomas Michiels (coord.)	FR [q1] [30h +10h] [3 Credits]
WSBIM1227	Molecular biology and integrated biochemistry	Luc Bertrand	FR [q2] [20h +30h] [3 Credits]
WMDS1230	Biologie cellulaire médicale et expérimentale	Stefan Constantinescu (coord.) Christophe Pierreux Donatienne Tyteca	FR [q1] [30h +20h] [4 Credits]
WSBIM1201	General physiology - General physiology		FR [q1] [40h +25h] [6 Credits]
WSBIM1203	Special histology and hematology	Christophe Pierreux (coord.) Mieke Van Bockstal	FR [q1] [15h +15h] [3 Credits]
WFARM1282	General microbiology	Thomas Michiels	FR [q1] [20h +15h] [3 Credits]
WSBIM1200	Biomedical instrumental analysis and radiation protection	Giulio Muccioli	FR [q1] [30h +30h] [4 Credits] *> English-friendly*
WFARM1213S	Human physiology and basics of physiopathology - (Partim SBIM)		FR [q2] [50h] [5 Credits] *> English-friendly*
WSBIM1293	Training course in cell biology	Laure Dumoutier (coord.) Julie Stockis	FR [q2] [30h] [2 Credits]

L'homme et la société : approche contextuelle

WFARM1247	Statistical data processing	Eugen Pircalabelu	FR [q2] [15h +15h] [3 Credits]
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

O Deuxième bloc annuel de bachelier

L'étudiant est tenu de suivre les cours suivants :

O WSBIM1205	Introduction to toxicology	Lidvine Boland Nathalie Delzenne Laure Elens Vincent Haufroid François Huaux (coord.) Violaine Verougstraete Alexis Wérion	FR [q2] [30h] [3 Credits]
O WSBIM1211	Methodolgy of cell and molecular biology	Guido Bommer Jean-François Collet (coord.) Stefan Constantinescu Pauline Leverrier Donatienne Tyteca	FR [q2] [22.5h] [3 Credits]
O WSBIM1206	From nutrient to food	Patrice Cani	FR [q1] [30h] [3 Credits] *> English-friendly*
O WSBIM1220	Neurobiology	Emmanuel Hermans (coord.) Pascal Kienlen-Campard Marcus Missal	FR [q2] [30h] [3 Credits] *> English-friendly*
O WSBIM1207	Introduction to bioinformatics	Laurent Gatto	FR [q2] [15h +20h] [3 Credits]

⊠ *Minor or additional module*

L'étudiant qui ne choisit pas l'approfondissement en sciences biomédicales, choisit une mineure d'ouverture proposée par d'autres programmes, à raison de 15 crédits en BAC2 et 15 crédits en BAC3.

Maximum 1 element(s)

SBIM1BA - 3RD ANNUAL UNIT

- Mandatory
- Optional
- Not offered in 2026-2027
- Not offered in 2026-2027 but offered the following year
- Offered in 2026-2027 but not the following year
- Not offered in 2026-2027 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

WSBIM1301	Pharmacology Part 1	Emmanuel Hermans (coord.)	FR [q1] [30h +7.5h] [3 Credits]

De la cellule à l'être humain

WSBIM1310	Human embryology	Charles De Smet (coord.) Christophe Pierreux	FR [q2] [24h] [2 Credits]
WSBIM1306	Histology and pathological anatomy workshop	Yves Guiot Christophe Pierreux (coord.) Mieke Van Bockstal	FR [q2] [30h] [2 Credits]
WMDS1256S	Pathologie biochimique et moléculaire - (partim SBIM)		FR [q2] [30h] [3 Credits]
WMDS1229	Génétique humaine	Miikka Vikkula	FR [q2] [20h] [2 Credits] > English-friendly
WSBIM1334	general immunology	Isabelle Leclercq Sophie Lucas (coord.) Jean-Christophe Renauld	FR [q1] [65h] [6 Credits] > English-friendly
WSBIM1382	Genetics and applied biotechnology	Luc Bertrand (coord.) Laure Dumoutier Géraldine Laloux Nisha Limaye	FR [q1] [30h] [3 Credits] > English-friendly
WSBIM1302	Molecular Virology	Thomas Michiels	FR [q1] [25h] [3 Credits]
WFARM1305	Elements of General Pathology	Mélanie Dechamps Olivier Feron (coord.)	FR [q2] [30h] [3 Credits] > English-friendly
WSBIM1313	Experimental design in biomedical sciences	Luc Bertrand Charles De Smet Pascal Kienlen-Campard (coord.)	FR [q2] [40h] [4 Credits] > English-friendly
WSBIM1335	Introduction to pathophysiology	Christiani Andrade Amorim Antoine Froidure Jean-Christophe Jonas (coord.) Shakeel Kautbally	FR [q2] [30h] [3 Credits]

L'homme et la société : approche contextuelle

WFARM1202	Eléments d'épidémiologie appliquée aux sciences pharmaceutiques et biomédicales	Séverine Henrard	FR [q2] [20h] [2 Credits] > *English-friendly*
WFARM2177	Biostatistics	Laure Elens	EN [q2] [20h +10h] [3 Credits]
LANGL2454	English for biomedical students	Nicholas Gibbs Nevin Serbest (coord.)	EN [q2] [30h] [3 Credits]

Stage en laboratoire

WSBIM1393	Laboratory training	Pascal Kienlen-Campard	FR [q1 or q2] [15h +15h] [3 Credits]

Additionnal module in Biomedical Sciences

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

Troisième bloc annuel de bachelier

L'étudiant est tenu de suivre les cours suivants :

WFARM2139T	Pharmacocinetic, genomics and toxicology (toxicology part)		EN [q1] [22h] [3 Credits] > *English-friendly*
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]
WSBIM1305	Introduction to human nutrition	Patrice Cani Nathalie Delzenne (coord.) Françoise Smets	FR [q1] [30h] [3 Credits]
WSBIM1323	Systemic neuroscience	Philippe Gailly Pascal Kienlen-Campard Marcus Missal (coord.)	FR [q1] [30h] [3 Credits]
WSBIM1322	Bioinformatics	Laurent Gatto	EN [q1] [30h +10h] [3 Credits]

Minor or additional module

L'étudiant qui ne choisit pas l'approfondissement en sciences biomédicales, choisit une mineure d'ouverture proposée par d'autres programmes, à raison de 15 crédits en BAC2 et 15 crédits en BAC3.

Maximum 1 element(s)

SBIM1BA - Information

Access Requirements

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

Except as otherwise provided by other specific legal provisions, admission to undergraduate courses leading to the award of a Bachelor's degree will be granted to students with one of the following qualifications :

1. A Certificate of Upper Secondary Education issued during or after the 1993-1994 academic year by an establishment offering full-time secondary education or an adult education centre in the French Community of Belgium and, as the case may be, approved if it was issued by an educational institution before 1 January 2008 or affixed with the seal of the French Community if it was issued after this date, or an equivalent certificate awarded by the Examination Board of the French Community during or after 1994;

2. A Certificate of Upper Secondary Education issued no later than the end of the 1992-1993 academic year, along with official documentation attesting to the student's ability to pursue higher education for students applying for a full-length undergraduate degree programme;

3. A diploma awarded by a higher education institution within the French Community that confers an academic degree issued under the above-mentioned Decree, or a diploma awarded by a university or institution dispensing full-time higher education in accordance with earlier legislation;

4. A higher education certificate or diploma awarded by an adult education centre;

5. A pass certificate for one of the entrance examinations organized by higher education institutions or by an examination board of the French Community; this document gives admission to studies in the sectors, fields or programmes indicated therein;

6. A diploma, certificate of studies or other qualification similar to those mentioned above, issued by the Flemish Community of Belgium, the German Community of Belgium or the Royal Military Academy;

7. A diploma, certificate of studies or other qualification obtained abroad and deemed equivalent to the first four mentioned above by virtue of a law, decree, European directive or international convention;

Note:

Requests for equivalence must be submitted to the Equivalence department (Service des équivalences) of the Ministry of Higher Education and Scientific Research of the French Community of Belgium in compliance with the official deadline.

The following two qualifications are automatically deemed equivalent to the Certificate of Upper Secondary Education (Certificat d'enseignement secondaire supérieur – CESS):

- European Baccalaureate issued by the Board of Governors of a European School,

- International Baccalaureate issued by the International Baccalaureate Office in Geneva.

8. Official documentation attesting to a student's ability to pursue higher education (diplôme d'aptitude à accéder à l'enseignement supérieur - DAES), issued by the Examination Board of the French Community.

Specific access requirements

- Access to bachelor programmes for candidates of nationality outside the European Union who are not assimilated to Belgian nationals is subject to the following criteria:
  - not have obtained a secondary education diploma for more than 3 years maximum. Example: for an admission application for the academic year 2026-2027, you must have obtained your diploma during the academic years 2023-2024, 2024-2025 ou 2025-2026. In the French Community of Belgium, the academic year runs from September 14 to September 13
  - not already hold an undergraduate degree
- Candidates, whatever their nationality, with a secondary school diploma **from a country outside the European Union**, must have obtained an average of 13/20 minimum or, failing that, have obtained this average, have passed one year of study in Belgium (for example special Maths / sciences). A non-successful year will not be taken into consideration.

- 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.
- Access to **Bachelor in Droit – Rechten – Laws**

  The Bachelor in Droit – Rechten – Laws 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 Academic regulations and procedures. 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)2 436 22 08 - Fax: +32 (0)2 764 73 63

Academic supervisor: Charles De Smet

Jury

- Président de jury de cycle de bachelier (y compris la première): Thomas Michiels
- Secrétaire de jury de cycle de bachelier (y compris la première): Laurent Gatto

Useful Contact(s)

- Personne de contact de la 1re année de bachelier: secretariat-bac1-fasb@uclouvain.be
- 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: Alice Thelen