

**At Bruxelles Woluwe - 180 credits - 3 years - Day schedule - In French**

## SBIM1BA - Introduction

### Introduction

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## SBIM1BA - Teaching profile

### Learning outcomes

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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 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

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## List of available minors

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## 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 purposes 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](#).

### # Prerequisites 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) WMD1120 ET WFARM1009 ET WMD1006
- WMD1120 - General biology and an experimental approach to biology
  - WFARM1009 - Elements of general and functional anatomy
  - WMD1006 - Cytology and general histology
- WFARM1221S** "Biochimie et biologie moléculaire (partim biochimie)" has prerequisite(s) WMD1120 ET WMD1006 ET WMD1106
- WMD1120 - General biology and an experimental approach to biology
  - WMD1006 - Cytology and general histology
  - WMD1106 - ORGANIC CHEMISTRY
- WFARM1247** "Traitement statistique des données" has prerequisite(s) WMD1102 ET WSBIM1001 ET LANGL1854
- WMD1102 - Physique expérimentale et introduction mathématique aux sciences expérimentales (1e partie)
  - WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
  - LANGL1854 - Medical English
- WFARM1282** "Microbiologie générale" has prerequisite(s) WMD1120 ET WMD1006 ET WSBIM1001
- WMD1120 - General biology and an experimental approach to biology
  - WMD1006 - Cytology and general histology
  - WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
- 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 WSBIM1201T ET WSBIM1201P ET WSBIM1205
- WFARM1221S - Biochemistry and molecular biology
  - WSBIM1201T - General physiology - General physiology (theory part, 40h)
  - WSBIM1201P - General physiology - General physiology (practical part, 25h)
  - WSBIM1205 - Introduction to toxicology
- WFARM2177** "Biostatistique" has prerequisite(s) WFARM1247
- WFARM1247 - Statistical data processing
- WMDS1229** "Génétique humaine" has prerequisite(s) WFARM1221S ET WSBIM1226 ET WMDS1230 ET WFARM1247
- WFARM1221S - Biochemistry and molecular biology
  - WSBIM1226 - Molecular biology (including epigenetics) and tutorials
  - WMDS1230 - Biologie cellulaire médicale et expérimentale
  - WFARM1247 - Statistical data processing
- WMDS1230** "Biologie cellulaire médicale et expérimentale" has prerequisite(s) WMD1120 ET WMD1006
- WMD1120 - General biology and an experimental approach to biology
  - WMD1006 - Cytology and general histology

- WMDS1231** "Biochimie humaine pathologique" has prerequisite(s) WFARM1213S ET WFARM1221S ET WSBIM1227 ET WFARM1282 ET WFARM1247 ET WSBIM1201T ET 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** "Pharmacologie 1re partie" has prerequisite(s) WFARM1213S ET WSBIM1201T ET 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** "Analyse instrumentale biomédicale et radioprotection" has prerequisite(s) WSBIM1001 ET WMD1105 ET WMD1106
- WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
  - WMD1105 - Chimie générale et minérale
  - WMD1106 - ORGANIC CHEMISTRY
- WSBIM1201P** "Physiologie générale (partie travaux pratiques, 25h)" has prerequisite(s) WMD1102 ET WMD1104
- WMD1102 - Physique expérimentale et introduction mathématique aux sciences expérimentales (1e partie)
  - WMD1104 - Physique expérimentale et introduction mathématique aux sciences expérimentales (2e partie)
- WSBIM1201T** "Physiologie générale (partim théorie, 40h)" has prerequisite(s) WMD1120 ET WMD1006 ET WMD1102 ET 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** "Histologie spéciale et hématologie" has prerequisite(s) WFARM1009 ET WMD1006
- WFARM1009 - Elements of general and functional anatomy
  - WMD1006 - Cytology and general histology
- WSBIM1205** "Introduction à la toxicologie" has prerequisite(s) WMD1105 ET WMD1106
- WMD1105 - Chimie générale et minérale
  - WMD1106 - ORGANIC CHEMISTRY
- WSBIM1206** "Du nutriment à l'aliment" has prerequisite(s) WFARM1009 ET WMD1105 ET WMD1106
- WFARM1009 - Elements of general and functional anatomy
  - WMD1105 - Chimie générale et minérale
  - WMD1106 - ORGANIC CHEMISTRY
- WSBIM1207** "Introduction à la bio-informatique" has prerequisite(s) WMD1102 ET WSBIM1001 ET LANGL1854
- WMD1102 - Physique expérimentale et introduction mathématique aux sciences expérimentales (1e partie)
  - WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
  - LANGL1854 - Medical English
- WSBIM1211** "Méthodologie de la biologie cellulaire et moléculaire" has prerequisite(s) WMD1120 ET WMD1006 ET WSBIM1001 ET 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** "Neurobiologie" has prerequisite(s) WFARM1009
- WFARM1009 - Elements of general and functional anatomy
- WSBIM1226** "Biologie moléculaire (dont l'épigénétique) et travaux dirigés" has prerequisite(s) WMD1120 ET WMD1106
- WMD1120 - General biology and an experimental approach to biology
  - WMD1106 - ORGANIC CHEMISTRY
- WSBIM1227** "Biologie moléculaire et biochimie intégrée" has prerequisite(s) WSBIM1001 ET WMD1106
- WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
  - WMD1106 - ORGANIC CHEMISTRY
- WSBIM1293** "Stage de biologie cellulaire" has prerequisite(s) WMD1120 ET WMD1006 ET WMD1104 ET WSBIM1001
- WMD1120 - General biology and an experimental approach to biology
  - WMD1006 - Cytology and general histology
  - WMD1104 - Physique expérimentale et introduction mathématique aux sciences expérimentales (2e partie)
  - WSBIM1001 - MATHEMATICAL METHODS IN BIOMEDICAL SCIENCES
- WSBIM1302** "Virologie moléculaire" has prerequisite(s) WSBIM1227 ET WFARM1282
- WSBIM1227

- WFARM1213S - [Human physiology and basics of physiopathology - \(Partim SBIM\)](#)
  - WSBIM1203 - [Special histology and hematology](#)
- WSBIM1310** "[Embryologie](#)" has prerequisite(s) WSBIM1226 ET WSBIM1227 ET WMDS1230
- WSBIM1226 - [Molecular biology \(including epigenetics\) and tutorials](#)
  - WSBIM1227 - [Molecular biology and integrated biochemistry](#)
  - WMDS1230 - [Biologie cellulaire médicale et expérimentale](#)
- WSBIM1313** "[Design expérimental en sciences biomédicales](#)" has prerequisite(s) WFARM1221S ET WSBIM1226 ET WSBIM1227 ET WMDS1230 ET WSBIM1293 ET WFARM1282 ET WSBIM1201T ET WSBIM1200
- 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](#)
  - WFARM1282 - [General microbiology](#)
  - WSBIM1201T - [General physiology - General physiology \(theory part, 40h\)](#)
  - WSBIM1200 - [Biomedical instrumental analysis and radiation protection](#)
- WSBIM1320** "[Introduction aux approches expérimentales de la biologie cellulaire et moléculaire](#)" has prerequisite(s) WSBIM1226 ET WSBIM1227 ET WMDS1230 ET WSBIM1211 ET LANGL1855 ET WSBIM1200
- WSBIM1226 - [Molecular biology \(including epigenetics\) and tutorials](#)
  - WSBIM1227 - [Molecular biology and integrated biochemistry](#)
  - 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) WSBIM1201T ET WSBIM1201P ET WSBIM1220
- WSBIM1201T - [General physiology - General physiology \(theory part, 40h\)](#)
  - WSBIM1201P - [General physiology - General physiology \(practical part, 25h\)](#)
  - WSBIM1220 - [Neurobiology](#)
- WSBIM1334** "[Immunologie générale](#)" has prerequisite(s) WFARM1221S ET WSBIM1226 ET WSBIM1227 ET WMDS1230 ET WFARM1282
- WFARM1221S - [Biochemistry and molecular biology](#)
  - WSBIM1226 - [Molecular biology \(including epigenetics\) and tutorials](#)
  - WSBIM1227 - [Molecular biology and integrated biochemistry](#)
  - WMDS1230 - [Biologie cellulaire médicale et expérimentale](#)
  - WFARM1282 - [General microbiology](#)
- WSBIM1335** "[Introduction à la physiopathologie](#)" has prerequisite(s) WSBIM1201T ET WFARM1213S
- WSBIM1201T - [General physiology - General physiology \(theory part, 40h\)](#)
  - WFARM1213S - [Human physiology and basics of physiopathology - \(Partim SBIM\)](#)
- WSBIM1382** "[Génétique et biotechnologie appliquée](#)" has prerequisite(s) WFARM1221S ET WSBIM1226 ET WSBIM1227 ET WMDS1230 ET WFARM1282
- WFARM1221S - [Biochemistry and molecular biology](#)
  - WSBIM1226 - [Molecular biology \(including epigenetics\) and tutorials](#)
  - WSBIM1227 - [Molecular biology and integrated biochemistry](#)
  - WMDS1230 - [Biologie cellulaire médicale et expérimentale](#)
  - WFARM1282 - [General microbiology](#)
- WSBIM1393** "[Stage d'immersion](#)" has prerequisite(s) WFARM1213S ET WFARM1221S ET WSBIM1226 ET WSBIM1227 ET WMDS1230 ET WSBIM1293 ET WSBIM1201T ET WSBIM1201P
- WFARM1213S





○ LANGL1855	Medical English 🇺🇸	Timothy Byrne (coord.) Aurélie Deneumoustier Carlo Lefevre (coord.)	FR [q1 or q2] [30h] [3 Credits] 🌐
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### ⚡ Additional 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...)

**o Majeure****o 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
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**o De la cellule à l'être humain**

● WSBIM1310	Human embryology ■		
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○ WSBIM1335	Introduction to pathophysiology 🟡	Christiani Andrade Amorim Antoine Froidure Jean-Christophe Jonas (coord.) Shakeel Kautbally	EN [q2] [30h] [3 Credits] 🌐
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### o L'homme et la société : approche contextuelle

○ WFARM1202	Eléments d'épidémiologie appliquée aux sciences pharmaceutiques et biomédicales 🟡	Séverine Henrard	EN [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] 🌐

### o Stage en laboratoire

○ WSBIM1393	Laboratory training 🟡	Pascal Kienlen-Campard	EN [q1 or q2] [15h +15h] [3 Credits] 🌐
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### ⌘ Additional module in Biomedical Sciences

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

#### o Troisième bloc annuel de bachelier

L'étudiant est tenu de suivre les cours suivants :

○ WFARM2139T	Pharmacocinetic, genomics and toxicology (toxicology part) 🟡	Laure Bindels (coord.)	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.)	EN [q2] [30h] [3 Credits] 🌐
○ WSBIM1305	Introduction to human nutrition 🟡	Véronique Beauloye Patrice Cani Nathalie Delzenne (coord.) Françoise Smets Matthias Van Hul	EN [q1] [30h] [3 Credits] 🌐
○ WSBIM1323	Systemic neuroscience 🟡	Philippe Gailly Pascal Kienlen-Campard Marcus Missal (coord.)	EN [q1] [30h] [3 Credits] 🌐
○ WSBIM1322	Bioinformatics 🟡	Laurent Gatto	EN [q1] [30h +10h] [3 Credits] 🌐



## SBIM1BA - Information

### Access Requirements

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*Decree of 7 November 2013 defining the landscape of higher education and the academic organization of studies.*

*The admission requirements must be met prior to enrolment in the University.*

***In the event of the divergence between the different linguistic versions of the present conditions, the French version shall prevail.***

#### SUMMARY

- [General access requirements](#)
- [Specific access requirements](#)
- [Access based on validation of professional experience](#)
- [Special requirements to access some programmes](#)

### 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.



## Teaching method

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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

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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](#)
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