



Bachelor in Biology

Option Bruxelles

BA-BIOL | BA-BIOLB | 2025-2026

The 2025-2026 programme is subject to change. It is provided for information purposes only.

Programme mnemonic

BA-BIOL

> Option *Bruxelles*: BA-BIOLB

Exists also in

> Option *Charleroi*: BA-BIOLC

Studies level

Bachelor

Learning language

french

Schedule

office hours

Studies categories / subcategories

Sciences and technics / Agronomy and bioengineering and / Sciences

Campus

Plaine

Programme's added value

Each year of the program includes several modules of practical training in laboratories where the students learn how to perform experiments and analyze results.

The training includes excursions to conduct field studies (observation, exploration, collection, analysis...)

In unit 2 and 3 a scientific training in English is provided.

In unit 2, computer training is provided.

Unit 1 comprises optional courses in earth and environmental sciences

In unit 3, students carry out a personal project of « Research and scientific communication ».

The ULB is internationally recognized for the excellence of its research teams in the field of Life Sciences.

The ULB has a Museum of Zoology (with the possibility of observation of living and preserved specimens) and an experimental botanical garden, freely available to students, and widely used in original teaching approaches.

Most molecular biology laboratories of the Faculty of Sciences of the ULB are grouped at the Biopark, a major centre of research and economic development located at Gosselies, near Charleroi.

Programme objectives

- > Acquiring the general scientific training (in Mathematics, Chemistry, Physics and Earth science) necessary for the study of Biology and that raise awareness of the students in all aspects of the progress of science.
- > Appropriating all the fundamental concepts of Biology and using them in new situations.
- > Acquiring the principles of scientific approach.
- > Acquiring an experimental training in the key disciplines of Biology (including dissections).
- > Learning to master the peculiarities of scientific language and writing, and communicating to a target audience appropriately.
- > Awareness of societal issues of Biology and Science (values, moral, ethic, and legal issues).

Teaching methods

The education are divided into:

- > Lectures (48%)
- > Exercises (18%)
- > Lab work (24%)
- > Personal work, including a project Research and scientific communication (8%)
- > Field works (3%).

Succeed in your studies

Choose





The information and guidance counsellors at the InfOR-études [<https://www.ulb.be/en/studies-info-desk-1>] service will help you choose your studies throughout the year.

Succeed

Take part in preparatory courses [<https://www.ulb.be/en/studies-info-desk-1>] or get help to succeed [<https://www.ulb.be/en/studies-info-desk-1>], before or during your studies.

Get help

Apply for financial aid, look for accommodation or a student job, get support [<https://www.ulb.be/fr/aides-services-et-accompagnement/aid-services-and-support-1>] for your specific needs.

International/Openness

The training provided by the ULB is internationally renowned. Thanks to the many agreements between the ULB and institutions worldwide, students may pursue part of their studies abroad.

Job opportunities

By prolonging the BA by a MA in Biochemistry and Molecular and Cellular biology, Biology of organisms and Ecology, or Bioinformatics and Modelling, students may pursue careers in the following areas:

- > **Industrial area** (pharmaceutical, biotechnology, food processing, environmental technology): research and development, responsible for management, communication and/or publishing; scientific advisor for the sale of high-tech products;
- > **Education**: teaching in secondary schools and at higher non-university level
- > **Academia**: teaching and research in universities and high schools;
- > **Public area** (local, regional, federal, international) and nongovernmental organizations (NGO): business related to conservation, management and valorization of resources

of biological diversity; to environment and sustainable development, quality control, biosafety, forensics, continuing education, dissemination of science;

After the Master, the student can continue his education by achieving a PhD, for which fellowships are available.

By prolonging the BA by a MA in Biochemistry and Molecular and Cellular Biology, Biology of organisms and Ecology, or Bioinformatics and Modelling, the student will address to one of the following careers:

- > Research (in companies, universities, public research institutions)
- > Teacher (secondary schools, higher non-university level)
- > Project manager for the conservation and management of natural resources, in NGOs, administrations and international institutions
- > Responsible for educational projects in the field of natural sciences in museums, ASBL, botanical gardens
- > Scientific advisor for the sale of products derived from biotechnology, pharmaceutical companies
- > Responsible for the monitoring of analyses (clinical, quality control, biodiversity, bioremediation, biosecurity, forensic, companies in biotechnology and genomics...)
- > Instructor in in-service training activities
- > Responsible for management, communication and/or in scientific publishing in a company (pharmaceutical, biotechnology, environmental technologies...) or a public institution
- > Etc....

Contacts

 ba-biol@ulb.be

 <https://sciences.ulb.be/departement-biologie-des-organismes>



Bachelor in Biology

Option Bruxelles

During the BA, you will receive a double competence:

- > a **general education** in Mathematics, Physics, Chemistry and Earth sciences;
- > a **specific education** in Life sciences: Zoology (including dissections), Botany, Ecology, Physiology, Genetics, Biochemistry, Cell biology, Molecular biology, Microbiology (viruses and bacteria).

The program covers two main topics:

- > **Biology of organisms.** It concerns with the knowledge and understanding of biological diversity, its evolution and its role in ecosystem functioning; therefore it studies the organization, physiology, and ecology of various types of organisms (animals, plants, fungi, micro-organisms);
- > **Molecular biology.** It deals with the understanding of biological phenomena through the study of molecules and cells constituting organisms. It also contributes to the study of pathologies (molecular causes and development of therapies).

The importance of these two topics is substantially equivalent (50/50%).

Bloc 1 | BA-BIOLB | BA-BIOL

Cours obligatoires

BIOL-F103	Bases de la biologie des organismes Martine VERCAUTEREN (Coordinator) and Karine VAN DONINCK ⌚ 10 credits [lecture: 60h, tutorial classes: 24h, practical work: 24h, field trips: 12h] 📅 first and second terms 🗨 French
BIOL-F104	Bases moléculaires du vivant Cyril GUEYDAN (Coordinator), Mélanie BOECKSTAENS and Véronique KRUYSS ⌚ 10 credits [lecture: 64h, tutorial classes: 20h, practical work: 12h] 📅 first and second terms 🗨 French
CHIM-F101	Chimie générale François RENIERS (Coordinator), Laurence RONGY and Thierry VISART DE BOCARME ⌚ 15 credits [lecture: 84h, tutorial classes: 48h, practical work: 48h, project: 40h] 📅 first and second terms 🗨 French
CHIM-F102	Chimie organique 1 Cécile MOUCHERON (Coordinator) ⌚ 5 credits [lecture: 30h, tutorial classes: 18h] 📅 second term 🗨 French
ENVI-F1001	Sciences de la Terre, Environnement et Société Pierre REGNIER (Coordinator), Jean-Michel DECROLY and Frank PATTYN ⌚ 5 credits [lecture: 48h, field trips: 12h] 📅 first and second terms 🗨 French
MATH-F119	Mathématiques Dimitri LEEMANS (Coordinator) and Antoine GLORIA ⌚ 10 credits [lecture: 60h, tutorial classes: 60h] 📅 first and second terms 🗨 French
PHYS-F104	Physique 1 Barbara CLERBAUX (Coordinator), Sébastien CLESSE and Michele SFERRAZZA ⌚ 5 credits [lecture: 40h, tutorial classes: 20h] 📅 first term 🗨 French

Bachelor in Biology

Option Bruxelles

Bloc 2 | BA-BIOLB | BA-BIOL

Cours obligatoires

- BIOL-F201 **Evolution et diversité des eucaryotes : botanique** | Pierre Jacques MEERTS (Coordinator)
 5 credits [lecture: 48h, practical work: 12h] first and second terms French
- BIOL-F202 **Evolution et diversité des eucaryotes : métazoaires** | Jean-Christophe DE BISEAU D'HAUTEVILLE (Coordinator) and Jean-François FLOT
 5 credits [lecture: 60h] second term French
- BIOL-F204 **Microbiologie moléculaire et cellulaire** | Laurence VAN MELDEREN (Coordinator) and Anne OP DE BEECK
 5 credits [lecture: 32h, practical work: 16h] second term French
- BIOL-F208 **Biochimie et physiologie de la cellule** | Vincent RAUSSENS (Coordinator), Véronique KRUYSS and Maud MARTIN
 5 credits [lecture: 60h] first term French
- BIOL-F209 **Travaux pratiques de botanique et zoologie** | Jean-Christophe DE BISEAU D'HAUTEVILLE (Coordinator), Jean-François FLOT and Pierre Jacques MEERTS
 5 credits [practical work: 60h] second term French
- BIOL-F210 **Evolution et diversité des bactéries et archées** | Jean-François FLOT (Coordinator) and Isabelle GEORGE
 5 credits [lecture: 32h, practical work: 16h] first term French
- BIOL-F211 **Travaux pratiques de biochimie** | Guillaume OLDENHOVE (Coordinator) and David PEREZ-MORGA
 5 credits [practical work: 48h] first term French
- CHIM-F201 **Chimie analytique 1** | Thomas DONEUX (Coordinator)
 5 credits [lecture: 24h, practical work: 36h, project: 12h] first term French
- LANG-F201 **Anglais scientifique I** | Alexander CORNFORD (Coordinator)
 5 credits [tutorial classes: 48h] second term English
- MATH-F116 **Mathématiques 2** | Antoine GLORIA (Coordinator) and Jennifer ALONSO GARCIA
 5 credits [lecture: 30h, tutorial classes: 30h] first and second terms French
- PHYS-F205 **Physique 2** | Michel TYTGAT (Coordinator) and Michele SFERRAZZA
 5 credits [lecture: 24h, tutorial classes: 16h, practical work: 20h] first term French

Cours optionnels

Choisir exactement 3 cours (un au bloc 2 et deux au bloc 3, dont au moins un des deux cours ETHI-F201 et/ou ETHI-F301)

One course chosen from the following

- BIOL-F303 (optional) **Laboratoires de biologie moléculaire** | Guillaume OLDENHOVE (Coordinator) and David PEREZ-MORGA
 5 credits [practical work: 48h] second term French
- BIOL-F304 (optional) **Evolution et diversité des arthropodes et des vertébrés** | Yves ROISIN (Coordinator)
 5 credits [lecture: 28h, practical work: 28h, seminars: 4h] second term French
- BIOL-F305 (optional) **Botanique, phytogéographie et ethnoécologie** | Farid DAHDOUH-GUEBAS (Coordinator)
 5 credits [lecture: 24h, practical work: 15h, field trips: 12h] second term English/French

- BIOL-F314
(optional) **Projet de recherche et communication scientifique** | Denis FOURNIER (Coordinator) and Eric BELLEFROID
⌚ 5 credits [project: 60h] 📅 first and second terms 🗨 French
- ETHI-F201
(optional) **Sciences, éthique, histoire et société** | Grégoire Wallenborn (Coordinator) and Eric MURAILLE
⌚ 5 credits [lecture: 48h] 📅 second term 🗨 French
- ETHI-F301
(optional) **Science et Société : analyse de controverses scientifiques** | Patrick MARDULYN (Coordinator) and Grégoire Wallenborn
⌚ 5 credits [lecture: 24h, project: 70h] 📅 first term 🗨 French
- INFO-F206
(optional) **Informatique** | Olivier MARKOWITCH (Coordinator)
⌚ 5 credits [lecture: 24h, tutorial classes: 24h, project: 12h] 📅 first term 🗨 French
- PHYS-F105
(optional) **La structure de l'univers** | Alain JORISSEN (Coordinator) and Rodrigo ALVAREZ
⌚ 5 credits [lecture: 48h] 📅 first term 🗨 French
- PHYS-F317
(optional) **How To Make (almost) Any Experiment Using Digital Fabrication** | Denis TERWAGNE (Coordinator)
⌚ 5 credits [lecture: 24h, practical work: 36h] 📅 first term 🗨 French
- TRAN-F201
(optional) **Introduction aux enjeux de la durabilité** | Wouter ACHTEN (Coordinator), Chiara ARMENI and Emilie JEMPA KANKO MUTOMBO
⌚ 5 credits [lecture: 24h, project: 24h] 📅 second term 🗨 French



Bachelor in Biology

Option Bruxelles

Bloc 3 | BA-BIOLB | BA-BIOL

Cours obligatoires

- BIOL-F301 **Physiologie et développement des plantes** | Nathalie VERBRUGGEN (Coordinator)
 5 credits [lecture: 36h, practical work: 24h] first and second terms French
- BIOL-F302 **Génétique** | Bruno ANDRE (Coordinator)
 5 credits [lecture: 24h, practical work: 24h] first term French
- BIOL-F308 **Mécanismes de l'évolution biologique** | Patrick MARDULYN (Coordinator) and Karine VAN DONINCK
 5 credits [lecture: 48h, tutorial classes: 12h] first term French
- BIOL-F309 **Ecologie** | Isabelle GEORGE (Coordinator)
 5 credits [lecture: 30h, practical work: 30h] first term French
- BIOL-F310 **Biodiversité et conservation** | Bruno DANIS (Coordinator) and Pierre Jacques MEERTS
 5 credits [lecture: 18h, tutorial classes: 14h, practical work: 4h, field trips: 24h] first and second terms French
- BIOL-F318 **Histophysiologie et développement animal** | Jacob SOUOPGUI (Coordinator), Eric BELLEFROID and Anna Maria MARINI
 5 credits [lecture: 60h] first term French
- BIOL-F322 **Biotechnologies** | Benoît VANHOLLEBEKE (Coordinator) and Nathalie VERBRUGGEN
 5 credits [lecture: 48h] second term French
- BIOL-F324 **Physique bioinspirée** | Denis TERWAGNE (Coordinator)
 5 credits [lecture: 30h, practical work: 30h] second term French
- LANG-F301 **Anglais scientifique II** | Hugh MURPHY (Coordinator) and Alexander CORNFORD
 5 credits [tutorial classes: 48h] first term English
- MATH-F316 **Biogéostatistiques** | Thomas VERDEBOUT (Coordinator)
 5 credits [lecture: 30h, tutorial classes: 24h] second term French

Cours optionnels

Choisir exactement 3 cours (un au bloc 2 et deux au bloc 3, dont au moins un des deux cours ETHI-F-201 et/ou ETHI-F-301)

Two courses chosen from the following

- BIOL-F303 (optional) **Laboratoires de biologie moléculaire** | Guillaume OLDENHOVE (Coordinator) and David PEREZ-MORGA
 5 credits [practical work: 48h] second term French
- BIOL-F304 (optional) **Evolution et diversité des arthropodes et des vertébrés** | Yves ROISIN (Coordinator)
 5 credits [lecture: 28h, practical work: 28h, seminars: 4h] second term French
- BIOL-F305 (optional) **Botanique, phytogéographie et ethnoécologie** | Farid DAHDOUH-GUEBAS (Coordinator)
 5 credits [lecture: 24h, practical work: 15h, field trips: 12h] second term English/French
- BIOL-F314 (optional) **Projet de recherche et communication scientifique** | Denis FOURNIER (Coordinator) and Eric BELLEFROID
 5 credits [project: 60h] first and second terms French
- BIOL-F320 (optional) **Travaux pratiques d'histophysiologie et développement animal** | Eric BELLEFROID (Coordinator), Anna Maria MARINI and Jacob SOUOPGUI
 5 credits [practical work: 48h] second term French

ETHI-F201 (optional)	Sciences, éthique, histoire et société Grégoire Wallenborn (Coordinator) and Eric MURAILLE ⌚ 5 credits [lecture: 48h] 📅 second term 🗨 French
ETHI-F301 (optional)	Science et Société : analyse de controverses scientifiques Patrick MARDULYN (Coordinator) and Grégoire Wallenborn ⌚ 5 credits [lecture: 24h, project: 70h] 📅 first term 🗨 French
INFO-F206 (optional)	Informatique Olivier MARKOWITCH (Coordinator) ⌚ 5 credits [lecture: 24h, tutorial classes: 24h, project: 12h] 📅 first term 🗨 French
PHYS-F105 (optional)	La structure de l'univers Alain JORISSEN (Coordinator) and Rodrigo ALVAREZ ⌚ 5 credits [lecture: 48h] 📅 first term 🗨 French
PHYS-F317 (optional)	How To Make (almost) Any Experiment Using Digital Fabrication Denis TERWAGNE (Coordinator) ⌚ 5 credits [lecture: 24h, practical work: 36h] 📅 first term 🗨 French
TRAN-F201 (optional)	Introduction aux enjeux de la durabilité Wouter ACHTEN (Coordinator), Chiara ARMENI and Emilie JEMPA KANKO MUTOMBO ⌚ 5 credits [lecture: 24h, project: 24h] 📅 second term 🗨 French

