

Parcours Biologie internationale 1re et 2e année

Présentation

The International Biology course is a selective course that offers a bilingual general training in biology, supplemented by courses in physics, mathematics, chemistry and statistics. It is taught and assessed in English for 75% of its content. The scientific programme is modelled on that of the Life Sciences portal for the first year and on that of the Biology course for the second year. For the third year, students are strongly encouraged to spend one or two semesters on international exchange programmes that allow them to validate the UGA Life Science degree with part of the courses taken abroad. Alternatively, students can join the Biology or Ecosphere programmes of the Life Sciences degree in the 3rd year, which are taught in French.

In the continuity of the high school science program, the first year of the International Biology course offers general training in biology at all scales (from the molecule to the ecosystem), complemented by courses in physics, mathematics, computer science, chemistry, statistics, earth sciences, and English. The objective of this first year is to consolidate the basic scientific knowledge acquired in high school. During the second year, the students acquire fundamental, theoretical and practical knowledge in all disciplines of biology and have the opportunity to deepen their knowledge in one or more disciplinary areas owing to optional teaching units. The International Biology course also provides a solid training in scientific English thanks to subject-specific courses taught in English and advanced courses in English offered each semester, in order to prepare for IELTS certification.

Targeted skills

The targeted skills are disciplinary knowledge in Life Sciences, including all disciplines of biology (biochemistry, molecular biology, genetics, microbiology, animal physiology, plant physiology, ecology) completed by knowledge in biostatistics and chemistry. The training provided in English also aims at an excellent mastery of communication in English. At the end of the course, students will be able to

- Build an experimental protocol with rigour and autonomy
- Apply an experimental protocol in compliance with health and safety rules
- Communicate scientific data in French and English
- Carry out a bibliographic synthesis and a scientific watch
- Work independently and in collaboration

Admission

Candidature

Candidates for the International Biology course are selected for entry into the first year on the basis of their high school grades: in particular, a good level of biology and chemistry is expected, as well as basic mathematics and physics, not to mention good written and oral expression skills in french as well as in English.

Each year, 32 places are available. Decisions on admission to the course are communicated via the Parcoursup portal.

Pré-requis obligatoires

Success in the first year of a scientific degree requires mastery of the knowledge and skills acquired in high school, a good knowledge of the opportunities available in each university field, and a commitment by the future student to his or her chosen study project. It is expected that candidates for the Life Sciences degree will

Have scientific skills. This mention implies, indeed, to have an ability to analyse, pose a problem and lead a reasoning, a capacity of abstraction, logic and modelling and the control of a base of disciplinary knowledge and associated experimental methods.

Have communication skills. This mention requires the ability to communicate in writing and orally in a rigorous and appropriate manner, the ability to document in at least one foreign language, primarily English, and the ability to write and speak it at a B level.

Have methodological and behavioural skills. This qualification requires intellectual curiosity, the ability to organise and manage learning and, lastly, the ability to plan personal work and stick to it over time.

In these main areas and for all the science degree options, the student must demonstrate at least a good command of the main scientific skills targeted in the final year of secondary school. In addition :

- Each science degree major is characterised by a major discipline (the name of the major), for which a very good mastery of the corresponding subjects in high school is recommended, and a good mastery of any associated experimental skills.

- Each major often includes a second discipline for which a good command of the corresponding subjects in high school is recommended.

A very good command of the skills expected in Life and Earth Sciences at the end of the final year of secondary school is recommended. A good command of the experimental skills expected in Life and Earth Sciences at the end of the final year is recommended. A good command of the skills expected in Physics and Chemistry at the end of the final year is recommended, depending on the portal to which the subject belongs.

Droits de scolarité

Droits de scolarité 2020-2021 : 170 €

Poursuite d'études

The holder of a Bachelor's degree in Life Sciences, International Biology course, can continue his or her training in a Master's degree in Life Sciences in France or abroad. At Grenoble Alpes University, several courses are offered: the "Molecular and cellular Biology" master's degree, the "Biodiversity, ecology, evolution" master's degree.

Sectors of activity

The sectors of activity targeted by the Bachelor of Life Sciences, International Biology course are

- Research and development
- Scientific and technical animation (park manager, guide, animator, scientific journalism)
- Research consultancies, scientific and technical advisors
- Agri-food industries
- Analysis and control (environment, health)

Infos pratiques :

- > Composante : Département de la licence sciences et technologies (DLST), UFR Chimie-Biologie
- > Durée : 2 ans
- > Type de formation : Formation initiale / continue
- > Lieu : Grenoble - Domaine universitaire

Contacts

Responsable pédagogique

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Secrétariat de scolarité

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Programme

1st year programme	
Semester 1	Semester 2
BIO131 – Biochemistry 1: The biomolecular constituents of the cell	BIO106 – Cell Biology
CHI131 - Structure of the matter	BIO131 - Biology of organisms
STE133 - Issues and risks in Geosciences	CHI233 – General Chemistry
INF135 - Computer science for life sciences	MAT236 - Introduction to mathematical biology and population dynamics
MAT133 - Basic mathematical tools for the natural sciences	PHY236 – Instrumental optics
PHY135 - Electrical and transport phenomena	MEP231 – Method. Exp. in cell biology /biochemistry or MEP232 – Method. Exp. in organism biology
MEP101 - Méthodes expérimentales pluridisciplinaires en Chimie et Biochimie	UET2 - Processus d'exploration professionnelle 1 + PAN 1
UET1 - Formation bureautique et Internet + Enseignement transversal au choix	

2nd year programme	
Semester 3	Semester 4
BIO311 - Cell Biology 2	BIO430 - Biochemistry 2: Enzymology and Metabolism
BIO311 - Genetics	BIO314 - Physiology
CHI335 - Chemical thermodynamics and kinetics	BIO401 - Écologie
STA331 - Statistical methods for biology	CHI430 - Aqueous solutions in biology
BIO303 - Communications nerveuse/hormonale	BIO434 - Experimental project in biology
OU BIO304 - Valorisation des ressources végétales	OU BIO407 - Questions d'actualité en biologie
OU BIO305 - Interactions bactéries/hôtes	
IELTS/ PEP2	PAN431

The links below allow you to access the courses' presentation sheets. The International Biology course booklet containing a detailed description of the courses is available in the TÉLÉCHARGER tab.

Licence 1re année

Semestre 1

UE Méthodes expérimentales pluridisciplinaires 1- MEP101 -	3 ECTS
ETC - FBI	3 ECTS
UE Biochemistry 1 - BIO131 -	6 ECTS

UE Structure of matter - CHI131 -	6 ECTS
UE Mathematic tools for life sciences - MAT133 -	3 ECTS
UE Electrical and transport phenomena - PHY135 -	3 ECTS
UE Risks and challenges in earth sciences - STE133 -	3 ECTS
UE Computer sciences for life sciences - INF135	3 ECTS

Semestre 2

UE Anglosaxon culture / Pep - PAN231 -	3 ECTS
UE Cell biology 1 - BIO231 -	6 ECTS
UE Organisms biology and evolution - BIO232 -	6 ECTS
UE Introduction à la biologie mathématique et à la dynamique des populations - MAT236 -	3 ECTS
UE Instrumental optics - PHY236 -	3 ECTS
UE General Chemistry - CHI233 -	6 ECTS
1 option(s) au choix parmi 2	
Experimental methods in cell biology and biochemistry - MEP231 -	3 ECTS
Experimental methods in organism biology - MEP232 -	3 ECTS

Licence 2e année

Semestre 3

UE Cell Biology 2 - BIO331 -	6 ECTS
UE Genetics - BIO332 -	6 ECTS
UE Chemical thermodynamics and kinetics for biologists - CHI335 -	6 ECTS

UE Statistics and probability for life sciences - STA331 - 6 ECTS

UE Préparation IELTS - PEP

1 option(s) au choix parmi 3

UE Interactions bactéries & hôtes: symbiose, commensalisme et parasitisme - BIO305 - 3 ECTS

UE Valorisation des ressources végétales - BIO304 - 3 ECTS

UE Communication nerveuse et hormonale - BIO303 - 3 ECTS

Semestre 4

UE Biochemistry 2 : Enzymology and metabolism - BIO439 - 6 ECTS

UE Physiology - BIO432 - 6 ECTS

UE Ecologie - BIO403 - 6 ECTS

UE Scientific culture - PAN431 - 3 ECTS

UE Aqueous solutions in biology - CHI430 - 3 ECTS

1 option(s) au choix parmi 2

UE Questions d'actualité en biologie - BIO407 - 6 ECTS

UE Experimental project in biology - BIO434 - 6 ECTS
