SCIENCES, TECHNOLOGIES, SANTÉ, INGÉNIERIE

Parcours Biologie international 1re et 2e année

Licence Sciences de la vie

Durée
2 ans

Composante
Département de la licence sciences et technologies (DLST), UFR Chimie-Biologie

Langue(s) d'enseignement
Anglais, Français

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.

Droits de scolarité

Droits de scolarité 2024-2025 175 € et CVEC 103 €

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.

Et après

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

Contacts

Responsable pédagogique

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Secrétariat de scolarité

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Secrétariat de scolarité

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Lieu(x) ville

Grenoble

Campus

Grenoble - Domaine universitaire

Programme

Spécificités du programme

1st year programme

Semester 1	Semester 2
BIO131 – Biochemistry 1: The biomolecular constituents of the cell	BIO231 – Cell Biology
CHI131 - Structure of the matter	BIO232 - Biology of organisms
STE133 - Issues and risks in Geosciences	CHI233 – General Chemistry
INF135 - Computer science for life sciences	
MAT133 - Basic mathematical tools for the natural sciences	MAT236 - Introduction to mathematical biology and population dynamics
PHY135 - Electrical and transport phenomena	PHY236 – Instrumental optics
MEP101 - Méthodes expérimentales pluridisciplinaires en Chimie et Biochimie	MEP231 – Method. Exp. in cell biology /biochemistry or MEP232 – Method. Exp. in organism biology
UET1 - Formation bureautique et Internet + Enseignement transversal au choix	UET2 - Processus d'exploration professionnelle 1 + PAN 1

2nd year programme

Semester 3	Semester 4
BIO331 - Cell Biology 2	BIO439 - Biochemistry 2: Enzymology and Metabolism
BIO332 - Genetics	BIO432 - Physiology
CHI335 - Chemical thermodynamics and kinetics	BIO403 - Écologie
STA331 - Statistical methods for biology	CHI430 - Aqueous solutions in biology
BIO303 - Communications nerveuse/hormonale ou BIO304 - Valorisation des ressources végétales ou BIO305 - Interactions bactéries/hôtes	BIO434 - Experimental project in biology ou BIO407 - Questions d'actualité en biologie
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

	Nature	CM	TD	TP	Crédits
UE Méthodes expérimentales pluridisciplinaires 1- MEP101 -	UE	1,5h	12h	14h	3 crédits
ETC - FBI	UE		30h		3 crédits
UE Biochemistry 1 - BIO131 -	UE	21h	30h	8h	6 crédits
UE Structure of matter - CHI131 -	UE	18h	33h	6h	6 crédits
UE Mathematic tools for life sciences - MAT133 -	UE				3 crédits
UE Electrical and transport phenomena - PHY135 -	UE	12h	12h	8h	3 crédits
UE Risks and challenges in earth sciences - STE133 -	UE	15h	12h		3 crédits
UE Computer sciences for life sciences - INF135	UE			15h	3 crédits

Semestre 2

	Nature	CM	TD	TP	Crédits
UE Anglosaxon culture / Pep - PAN231 -	UE		30h		3 crédits
UE Cell biology 1 - BIO231 -	UE	22,5h	34,5h		6 crédits
UE Organisms biology and evolution - BIO232 -	UE	39h	16h		6 crédits
UE Introduction à la biologie mathématique et à la dynamique des populations - MAT236 -	UE		22h		3 crédits
UE Instrumental optics - PHY236 -	UE			14h	3 crédits
UE General Chemistry - CHI233 -	UE	22,5h	21h	4h	6 crédits
Experimental methods in cell biology and biochemistry - MEP231 -	UE		9h	21h	3 crédits
Experimental methods in organism biology - MEP232 -	UE			30h	3 crédits

Licence 2e année

Semestre 3

	Nature	CM	TD	TP	Crédits
UE Cell Biology 2 - BIO331 -	UE	30h	15h	14h	6 crédits
UE Genetics - BIO332 -	UE	28,5h	21h	12h	6 crédits

UE Chemical thermodynamics and kinetics for biologists - CHI335 -	UE	19,5h	30h	8h	6 crédits
UE Statistics and probability for life sciences - STA331 -	UE			36h	6 crédits
UE Préparation IELTS - PEP	UE				
UE Interactions bactéries & hôtes: symbiose, commensalisme et parasitisme - BIO305 -	UE	12h	15h		3 crédits
UE Valorisation des ressources végétales - BIO304 -	UE	9h	21h		3 crédits
UE Communication nerveuse et hormonale - BIO303 -	UE	13,5h	13,5h		3 crédits

Semestre 4

	Nature	CM	TD	TP	Crédits
UE Biochemistry 2 : Enzymology and metabolism - BIO439 -	UE	19,5h	19,5h	12h	6 crédits
UE Physiology - BIO432 -	UE	27h	12h	18h	6 crédits
UE Ecologie - BIO403 -	UE	19,5h	20,5h	4h	6 crédits
UE Scientific culture - PAN431 -	UE		18h		3 crédits
UE Aqueous solutions in biology - CHI430 -	UE	7,5h	15h	6h	3 crédits
UE Questions d'actualité en biologie - BIO407 -	UE	30h	30h		6 crédits
UE Experimental project in biology - BIO434 -	UE	1h	7,5h	32h	6 crédits