

Parcours Biologie internationale 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 |