

**At Louvain-la-Neuve - 180 credits - 3 years - Day schedule - In French**

Dissertation/Graduation Project : **NO** - Internship : **YES**

Activities in English: **YES** - Activities in other languages : **NO**

Activities on other sites : **NO**

Main study domain : **Sciences**

Organized by: **Faculty of Science (SC)**

Programme acronym: **BIOL1BA** - Francophone Certification Framework: 6

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## BIOL1BA - Introduction

### Introduction

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## BIOL1BA - Teaching profile

### Learning outcomes

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The programme aims at the acquisition of :

- General competence and skills in the principal disciplines of the Exact Sciences (Biology, Chemistry, Mathematics and Physics) and a deepening of the basic competence and skills in the different sectors of Biology
- The capacity to gain knowledge, such as through self-study, through rigorous application of the first stages of a general scientific approach (observation, analysis, summaries, criticism)
- Expertise in the written and oral presentation of scientific texts
- Transversal competence and skills ( Human Sciences, Computing, Management, English, Written and Oral Communication ), with a view to increasing both the general nature of the training and the chance of getting a foothold on the job market upon completion of the studies.

On successful completion of this programme, each student is able to :

1. Maitriser et utiliser les savoirs et les compétences acquises pendant la formation pour résoudre des problèmes complexes et pour évoluer dans un environnement professionnel en constante évolution.

- 5.2 Gérer sa formation : développer des objectifs pour sa formation future en master et formuler progressivement un projet professionnel, établir le choix de mineure, de cours, de stages, le cas échéant de séjour en programme d'échange en conformité avec ces objectifs et en fonction de contraintes externes.
- 5.3 Exercer ses compétences et utiliser ses connaissances dans des situations d'apprentissage variées et nouvelles et tirer parti de ces situations nouvelles.
- 5.4 Identifier les applications des savoirs biologiques à travers l'observation et la participation aux activités de professionnels dans le domaine de la biologie par le biais de stages.
6. Travailler en équipe sur des questions multidisciplinaires centrées sur la biologie et ainsi développer des qualités relationnelles
- 6.1 Identifier les objectifs et responsabilités individuels et collectifs en tenant compte des avantages et des contraintes d'une action collective et organiser et réaliser le travail en conformité avec ces rôles, en particulier dans le cadre d'études pratiques, de laboratoire et / ou sur le terrain.
- 6.2 Partager les savoirs et les méthodes, favoriser la collaboration et l'entraide.
- 6.3 Reconnaître et respecter les points de vue et opinions des membres de l'équipe, établir des compromis.
- 6.4 Evaluer ses performances en tant que membre d'une équipe ainsi que les performances des autres membres de l'équipe de la façon la plus objective possible.
- 6.5 Lors de stages, s'intégrer dans une équipe professionnelle et collaborer avec ses membres avec modestie, ouverture d'esprit et curiosité.
7. Agir en scientifique conscient de lui-même et du monde, responsable et respectueux de son environnement
- 7.1 Référencer ses travaux conformément aux standards du monde scientifique et sans plagiat.
- 7.2 Etre conscient de l'impact environnemental de certaines activités d'études du baccalauréat en sciences biologiques et respecter des règles et des lois visant à en minimiser l'importance.
- 7.3 Mener une réflexion personnelle et critique sur sa formation, sa façon de travailler, ses objectifs, sa motivation.
- 7.4 Etre conscient de l'impact sociétal des développements scientifiques, réfléchir et débattre sur les controverses actuelles dans le domaine des sciences biologiques, entre autres celles qui touchent à la qualité de la vie et l'action de l'homme sur son environnement.

## Programme structure

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The programme consists of a major of 150 credits, completed :

- either by blocks of options orientated towards the main domains of Biology (30 credits). These course blocks are taken in the 3rd year of the bachelor's programme
- or by a minor with studies more directed towards Chemistry (30 credits) ; this minor in Chemistry begins in the 2nd year of the bachelor's programme with a prerequisite course for the same minor in the third year of the bachelor's programme
- or by another minor selected from the University programme in concertation with the study advisor. This minor will be taken in its entirety (30 credits) in the 3rd year of the bachelor studies.

The progressive orientation of the programme starts right from the first year of polyvalent studies. The first year programme aims at the acquisition of basic knowledge in Sciences, (Mathematics, Physics, Chemistry, Biology and Earth Sciences).

At the end of the first year, the students may re-orientate their studies, without the need for any complements, to the second year of the bachelor's of Biochemistry and of Bioengineering Science and also to that of Geographical Science, subject to an extra course in Geography (GEO 1111).

The second year is composed of a common pool of subjects totalling 54 credits, to which are added, in accordance with the student's personal choice, a project of 4 credits and a course in Philosophy of 2 credits, or a minor in Chemistry of 6 credits. The third year again takes the form of a common pool of subjects (30 credits) and options in the form of personally selected blocks of courses (30 credits) or a minor. The programme groups different subjects together with the aim of breaking down the boundaries of the different disciplines.

Physics and Biophysics (18 credits)

- General Physics I (75-75) (12 credits)
- Biophysics (45-30) (6 credits)

These courses are followed in the order indicated

Earth Sciences (45-30) (6 credits)

Chemistry - Biochemistry (25 credits)

- General Chemistry (60-60) (10 credits)
- Organic Chemistry I (30-30) (5 credits)
- Bio-organic Chemistry (30-10) (3 credits)
- Elements of Biochemistry (30-24) (4 credits)
- Metabolic Biochemistry B (22,5-15) (3 credits)





o Microbiologie et virologie (4 credits)

o LBIO1311

Microbiology and virology

Benoît Desguin  
Thomas Michiels

FR



**o Minor or additional module (30 credits)**

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*L'étudiant complète sa formation en choisissant un approfondissement ou une mineure dans la liste proposée pour le bachelier en sciences biologiques. Il répartit les unités d'enseignement dans le 2e et le 3e bloc annuel, de manière à ce que son programme annuel totalise 60 crédits.*

*Maximum 1 element(s)*

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## List of available minors

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The students can choose a minor from the list below or can opt for another minor on the University programme, based on a project to be elaborated together with the study advisor.

- > **Additional module in Biology** [ en-prog-2024-appbiol ]
- > **Minor in Chemistry** [ en-prog-2024-minchim ]
- > **Minor in Criminology** [ en-prog-2024-mincrim ]
- > **Minor in entrepreneurship (\*)** [ en-prog-2024-minmpme ]
- > **Minor in Economics (open)** [ en-prog-2024-minoeco ]
- > **Minor in numerical technologies and society** [ en-prog-2024-minstic ]
- > **Minor in Biomedicine (openness)** [ en-prog-2024-minsbim ]
- > **Minor in Culture and Creation** [ en-prog-2024-mincucrea ]
- > **Minor : Issues of Transition and Sustainable Development (\*)** [ en-prog-2024-mindd ]
- > **Minor in Gender Studies** [ en-prog-2024-mingenre ]
- > **Minor in Geography** [ en-prog-2024-mingeog ]
- > **Minor in Statistics, Actuarial Sciences and Data Sciences** [ en-prog-2024-minstat ]
- > **Mineure Polytechnique** [ en-prog-2024-minpoly ]
- > **Minor in Computer Sciences** [ en-prog-2024-minsinf ]

## Course prerequisites

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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

**LANG1862** "English: reading and listening comprehension of scientific texts" has prerequisite(s) LANG1861

- LANG1861 - English: reading and listening comprehension of scientific texts

**LVETE1300** "Integrated Seminars" has prerequisite(s) LANG1861

- LANG1861 - English: reading and listening comprehension of scientific texts

## The programme's courses and learning outcomes

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For each UCLouvain training programme, a [reference framework of learning outcomes](#) specifies the skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference framework of learning outcomes.

## Detailed programme per annual block

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### BIOL1BA - 1ST ANNUAL UNIT

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- 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]

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**BIOL1BA - 2ND 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 Mathématiques et statistiques**

○ LBIO1282	Management and exploration of biological data	Renate Wesselingh	FR [q1] [20h +15h] [2 Credits] 🌐
○ LBIO1283	Statistical principles and biological data analysis	Nicolas Schtickzelle	FR [q2] [30h +40h] [4 Credits] 🌐

**o Physique et biophysique**

○ LPHY1103	Additional physics	Gabriel Dias de Carvalho Junior Marco Drewes	FR [q2] [40h +10h] [4 Credits] 🌐
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**o Chimie et biochimie**

○ LCHM1242	Bio-organic chemistry	Benjamin Elias Patrice Soumillion	FR [q1] [30h +10h] [3 Credits] 🌐
○ LCHM1271A	Elements of biochemistry	Patrice Soumillion	FR [q1] [30h +20h] [3 Credits] 🌐

**o Biologie cellulaire**

○ LBIO1235	General cell physiology	Stanley Lutts Valérie Van der Eecken (compensates Jean-François Rees)	FR [q1] [15h +15h] [2 Credits] 🌐
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**o Biologie végétale**

○ LBIO1240	Plant physiology	Xavier Draye Stanley Lutts	
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**BIOL1BA - 3RD ANNUAL UNIT**

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- 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, ...)

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Click on the course title to see detailed informations (objectives, methods, evaluation...)

**o Majeure**

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**o Mathématiques et statistiques**

● LBIO1383	<a href="#">Statistical methods applied to biology</a>	Anouar El Ghouch	(FR) [q2]
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## BIOL1BA - Information

### Access Requirements

*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, or an equivalent certificate awarded by the Examination Board of the French Community during or after 1994;
2. A Certificate of Upper Secondary Education issued no later than the end of the 1992-1993 academic year, along with official documentation attesting to the student's ability to pursue higher education for students applying for a full-length undergraduate degree programme;
3. A diploma awarded by a higher education institution within the French Community that confers an academic degree issued under the above-mentioned Decree, or a diploma awarded by a university or institution dispensing full-time higher education in accordance with earlier legislation;
4. A higher education certificate or diploma awarded by an adult education centre;
5. A pass certificate for one of the



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## Teaching method

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Des séances sont organisées au cours de la première année autour des questions de méthode de travail, par exemple la gestion du temps ou la manière d'aborder les différentes matières.

Outre des rapports à remettre ou des contrôles de connaissances au début de certaines séances de laboratoires, des interrogations obligatoires intervenant dans la note finale de chaque matière sont organisées après un mois de cours au premier quadrimestre.

Les exercices et laboratoires sont organisés en petits groupes et sont encadrés par des assistants. Les monitorats permettent à ceux qui le souhaitent de faire le point sur les matières vues au cours : les enseignants de chaque discipline répondent aux questions des étudiants et expliquent les points moins bien compris.

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Website

Academic supervisor: [Muriel Quinet](#)

Jury

- President: [Patrick Dumont](#)
- Secretary: [Melissa Page](#)
- Study advisor: [Stanley Lutts](#)

Useful Contact(s)

- Administrative manager for the student's annual program: [Nathalie Micha](#)

