

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

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

Activities in English: **NO**

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Programme structure

This programme which leads to the title of "Bachelor of Engineering Sciences : Bioengineering", is composed of three years of studies. The training programme comprises different types of course activities : lectures, practical exercises, group work, individual work, tutorials, work experience and, of course, personal study.

Each course title is followed by a number indicating the number of hours the course represents per academic year. This number corresponds to lectures, unless a different teaching method (seminars, exercises) is mentioned in the course title. Where course activities (exercises, laboratory work or practical tasks) accompany one or several lectures, these are characterised by a second volume of hours per year. The course timetable is available at the secretary's office of the Faculty.

The number in brackets next to the number of course hours, relates to the total number of credits attributed to the course activity. This unit is a measure of the student's global workload for one year of studies and corresponds to the unit used by the European Credit Transfer System (ECTS). A full study year includes 60 credits. The sign (-) refers to the description of the training activity, available on the web site, when the credits differ for the study years or for the options of the same programme.

Information on credits not indicated on the study programme can be obtained from the secretary's office of the Faculty.

Principal Subjects

- Mathematics, analysis and data-processing
- Sciences and Engineering of Matter and Processes
- Life Sciences
- Earth Sciences and Ecosystems
- Human Sciences

BIR1BA Programme

Detailed programme by subject

- 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...)

Year

1 2 3

○ Major (148 credits)

○ Mathematics, data analysis (27 credits)

○ LBIR1110	Introduction to analysis	Emmanuel Hanert	FR [q1] [30h+30h] [6 Credits] 🌐	X		
○ LBIR1111	Complément d'analyse et d'algèbre	Marino Gran	FR [q2] [30h+30h] [6 Credits] 🌐	X		
○ LBIR1211	Analysis of multivariate functions ■	Emmanuel Hanert	FR [q1] [30h+30h] [5 Credits] 🌐		X	
○ LBIR1212	Probabilities and statistics (I) ■	Patrick Bogaert	FR [q1] [30h+15h] [4 Credits] 🌐		X	
○ LBIR1315	Probability and statistics II ■	Patrick Bogaert	FR [q1] [22.5h+22.5h] [3 Credits] 🌐			X
○ LBIR1351	Introduction to systems analysis ■	Philippe Baret	FR [q1] [10h+20h] [3 Credits] 🌐			X





○ Sciences et ingénierie de la matière et des procédés (46 credits)

○ LBIR1140	Chimie générale 1	Pierre Delmelle (coord.)				
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Year

1 2 3

● LCHM1141B	Organic chemistry	Benjamin Elias Charles-André Fustin	Q2 [q2] [30h+30h] [6 Credits] 
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				Year		
				1	2	3
○ LANGL2480	English Communication Skills for Bioengineers 	Ahmed Adriouèche Ariane Halleux Lucille Meyers Philippe Neyt Charlotte Peters (coord.) Adrien Pham Anne-Julie Toubeau (coord.)	EN [q2] [30h] [2 Credits]  > French-friendly			x
○ LBIR1260	Principles of economics 	Goedele Van den Broeck			x	
○ LBIR1360	Firm management and organisation 					

				Year		
				1	2	3
○ LBIR1340	Basis of quantum mechanics and spectroscopy 📄	Eric Gaigneaux (coord.) Xavier Gonze	FR [q2] [22.5h+22.5h] [3 Credits] 🌐 > English-friendly			x
○ LBIR1341	Laboratories, seminars and integrated practice of analytical chemistry 📄	Arnaud Detaille (compensates Christine Dupont)				

Course prerequisites

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, wroc|G| T J 0 0863 0 54 Tm29602In addition, wroc|Cifferent yea(in pre-0Tm erence
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](#).

o Human Sciences

<p>o LANGL1881</p>	<p>English : reading and listening comprehension of texts in Bioengineering</p>	<p>Charline Coduti (compensates Anne-Julie Toubeau) Ariane Halleux Sandrine Meirlaen (coord.) Yannick Paquin (compensates Anne-Julie Toubeau) Marine Volpe (compensates Amandine Dumont)</p>	<p>ES [q1] [30h] [2 Credits] </p>
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o Projects and Soft skills

<p>o LBIR1170</p>	<p>Projet appliqué en Chimie</p>	<p>Christine Dupont (coord.) Michel Ghislain Thibaut Huybrechts (compensates Christine Dupont)</p>	<p>ES [q2] [30h +60h] [5 Credits] </p>
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BIR1BA - 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
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○ LBIR1260	Principles of economics 🇺🇸	Goedele Van den Broeck	ES [q1] [30h +15h] [4 Credits] 🌐 > French-friendly
○ LSC1120A	Philosophy	Charles Pence	ES [q1] [45h] [2 Credits] 🌐

○ Projects and Soft skills

○ LBIR1270	Integrated project in environmental diagnosis 🇺🇸	Yannick Agnan Anne-Laure Jacquemart (coord.)	ES [q1] [30h +30h] [5 Credits] 🌐 > English-friendly
○ LBIR1271	Integrated project in programming and applied mathematics 🇺🇸	Patrick Bogaert Emmanuel Hanert (coord.) Marnik Vanclooster	ES [q2] [30h +30h] [5 Credits] 🌐

BIR1BA - 3RD 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 Major**o Mathematics, data analysis**

○ LBIR1315	Probability and statistics II ■	Patrick Bogaert	FR [q1] [22.5h +22.5h] [3 Credits] 🌐
○ LBIR1351	Introduction to systems analysis ■	Philippe Baret	FR [q1] [10h +20h] [3 Credits] 🌐

o Sciences et ingénierie de la matière et des procédés

○ LBIR1325A	Transfer of fluids and energy for Bio-engineer ■	Yann Bartosiewicz Quentin Goor (compensates Mathieu Javaux) Marnik Vanclooster	FR [q1] [37.5h +22.5h] [5 Credits] 🌐
○ LBIR1349	Analytical Chemistry I ■	Christine Dupont (coord.) Yann Garcia Yann Garcia (compensates Christine Dupont)	FR [q1] [30h +15h] [3 Credits] 🌐

o Life Sciences

○ LBIR1350	General Microbiology ■	Annika Gillis	FR [q2] [37.5h +15h] [4 Credits] 🌐
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o Human Sciences

○ LANGL2480	English Communication Skills for Bioengineers ■	Ahmed Adriouche Ariane Halleux Lucille Meyers Philippe Neyt Charlotte Peters (coord.) Adrien Pham Anne-Julie Toubeau (coord.)	EN [q2] [30h] [2 Credits] 🌐 > French- friendly
○ LBIR1360	Firm management and organisation ■	Pierre De Muelenaere	FR [q1] [30h +7.5h] [3 Credits] 🌐 > French- friendly
○ LBIR1361	Report on the work experience training	David Alsteens Charles Bielders Stephan Declerck Eric Gaigneaux (coord.) Michel Ghislain Caroline Louis	FR [q1 or q2] [120h] [5 Credits] 🌐 > English- friendly

BIR1BA - Information

Access Requirements

Decree of 7 November 2013 defining the landscape of higher education and the academic organization of studies.

- For any secondary school diploma **from a European Union country**, the admission request must contain the equivalence of your diploma or, at the very least, proof of the filing of the equivalence request with the Wallonia-Brussels Federation (French Community of Belgium). For any information relating to obtaining an equivalence, please refer to [the following site](#).
- For any secondary school diploma **from a country outside the European Union**, the admission application must contain the [equivalence of your diploma](#) issued by the Wallonia-Brussels Federation (French Community of Belgium). If you have a restrictive equivalence for the programme of your choice, in addition of it, you **must** have either the [DAES](#) or a certificate of successful completion of the [examination giving access to 1st cycle studies](#) when you submit your application

Access based on validation of professional experience

Admission to undergraduate studies on the basis of accreditation of knowledge and skills obtained through professional or personal experience (Accreditation of Prior Experience)

Subject to the general requirements laid down by the authorities of the higher education institution, with the aim of admission to the undergraduate programme, the examination boards accredit the knowledge and skills that students have obtained through their professional or personal experience.

This experience must correspond to at least five years of documented activity, with years spent in higher education being partially taken into account: 60 credits are deemed equivalent to one year of experience, with a maximum of two years being counted. At the end of an assessment procedure organized by the authorities of the higher education institution, the Examination Board will decide whether a student has sufficient skills and knowledge to successfully pursue undergraduate studies.

After this assessment, the Examination Board will determine the additional courses and possible exemptions constituting the supplementary requirements for the student's admission.

Special requirements to access some programmes

- Admission to **undergraduate studies in engineering: civil engineering and architect**

Pass certificate for the [special entrance examination for undergraduate studies in engineering: civil engineering and architect](#).

Admission to these courses is always subject to students passing the special entrance examination. Contact the faculty office for the programme content and the examination arrangements.

- Admission to **undergraduate studies in veterinary medicine**

