



UCLouvain  
 Study  
 programme  
 2019 - 2020

Minor in Engineering Sciences : biomedical (only available for  
 reenrolment)

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## Introduction

### Introduction

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## Teaching profile

### Learning outcomes

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The aim of the minor is to help students taking a baccalaureate in engineering science - civil engineering to gain an introduction into the multidisciplinary domain of biomedical engineering. Thanks to this introduction, which will require an introduction to the living world, future bachelors in engineering science - civil engineering will understand such concepts as the bioinstrument, biomaterial, artificial organs, medical imaging, modeling biological systems, etc, and will later be able to apply them to solving basic problems in the biomedical engineering field. In particular, students should be able to go on to study for a master's in the field of biomedical engineering.

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

1. maîtriser les aspects fondamentaux des sciences du vivant, et plus particulièrement de la biologie moléculaire et cellulaire, de la physiologie et de l'anatomie des systèmes, de la biochimie, et des mécanismes régissant le contrôle et l'apprentissage moteur.
2. démontrer une compréhension de base des concepts liés aux disciplines de bioinstrumentation, biomatériaux, organes artificiels et rééducation, imagerie médicale, et modélisation des systèmes biologiques.
3. appliquer ces concepts en vue de résoudre des problèmes élémentaires dans le domaine du génie biomédical.

## Detailed programme

### PROGRAMME BY SUBJECT

- Mandatory  
 △ Courses not taught during 2019-2020  
 ⊕ Periodic courses taught during 2019-2020
- ✘ Optional  
 ⊖ Periodic courses not taught during 2019-2020  
 ■ Activity with requisites

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

Year

2 3

#### o Contenu:

#### o Mineure en génie biomédical (30 credits)

● LGBIO1111	<a href="#">Biologie et physiologie cellulaire</a>	Charles De Smet Christophe De Vleeschouwer Pascal Kienlen-Campard	30h+15h	5 Credits	2q	x	
● LGBIO1112	<a href="#">Introduction to biomedical engineering</a>	Philippe Lefèvre	45h	5 Credits	2q	x	
● LGBIO1113	<a href="#">Anatomie et physiologie des systèmes</a>	Catherine Behets Wydemans Olivier Cornu Greet Kerckhofs	30h+15h	5 Credits	1q		x
● LGBIO1114	<a href="#">Artificial organs and rehabilitation</a>	Luc-Marie Jacquet Philippe Lefèvre Renaud Ronsse	30h+30h	5 Credits	2q		x
● LBIR1250	<a href="#">Biochemistry I</a>	Michel Ghislain Yvan Larondelle (coord.)	30h+15h	5 Credits	1q		x
● LGBIO1115	<a href="#">Introduction aux neurosciences</a>	Julie Duque (coord.) Aleksandar Jankovski Marcus Missal Sylvie Nozaradan	30h+30h	5 Credits	2q		x

### COURSE PREREQUISITES

A document entitled (nb: [not available](#) for this programme lgbio100i) specifies the activities (course units - CU) with one or more prerequisite(s) within the study programme, that is the CU whose learning outcomes must have been certified and for which the credits must have been granted by the jury before the student is authorised to sign up for that activity.

These activities are identified in the study programme: their title is followed by a yellow square.

As the prerequisites are a requirement of enrolment, there are none within a year of a course.

The prerequisites are defined for the CUs for different years and therefore influence the order in which the student can enrol in the programme's CUs.

In addition, when the panel validates a student's individual programme at the beginning of the year, it ensures the consistency of the individual programme:

- It can change a prerequisite into a corequisite within a single year (to allow studies to be continued with an adequate annual load);
- It can require the student to combine enrolment in two separate CUs it considers necessary for educational purposes.

For more information, please consult [regulation of studies and exams](https://uclouvain.be/fr/decouvrir/rgee.html) (<https://uclouvain.be/fr/decouvrir/rgee.html>).

### THE PROGRAMME'S COURSES AND LEARNING OUTCOMES

For each UCLouvain training programme, a [reference framework of learning outcomes](#) specifies the competences expected of every graduate on completion of the programme. You can see the contribution of each teaching unit to the programme's reference framework of learning outcomes in the document "[In which teaching units are the competences and learning outcomes in the programme's reference framework developed and mastered by the student?](#)"

## Information

### Liste des bacheliers proposant cette mineure

> [Bachelor in Engineering](#) [en-prog-2019-fsa1ba]

## Admission

### Specific Admission Requirements

The minor in biomedical engineering is mainly intended for students taking a baccalaureate in engineering science - civil engineering or some other baccalaureates (SC and BIR).

## Evaluation

*The evaluation methods comply with the regulations concerning studies and exams (<https://uclouvain.be/fr/decouvrir/rgee.html>). More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".*

### Possible trainings at the end of the programme

The minor in biomedical engineering provides access to the future master's in biomedical civil engineering for students who have obtained the bachelor's qualification in engineering science - civil engineering.

## Contacts

**Attention, you are currently reading an archived page: below contact informations were for program study 2019-2020 only. To get current contact informations please got to [current program study site](#).**

### Curriculum Management

Entity	
Structure entity	SST/EPL/GBIO
Denomination	(GBIO) ( <a href="https://uclouvain.be/repertoires/entites/gbio">https://uclouvain.be/repertoires/entites/gbio</a> )
Faculty	Louvain School of Engineering (EPL) ( <a href="https://uclouvain.be/repertoires/entites/epl">https://uclouvain.be/repertoires/entites/epl</a> )
Sector	Sciences and Technology (SST) ( <a href="https://uclouvain.be/repertoires/entites/sst">https://uclouvain.be/repertoires/entites/sst</a> )
Acronym	GBIO
Postal address	Place du Levant 3 - bte L5.03.02 1348 Louvain-la-Neuve Tel: <a href="tel:+32210472586">+32 (0) 10 47 25 86</a> - Fax: <a href="tel:+32210472598">+32 (0) 10 47 25 98</a>
Academic supervisor: Renaud Ronsse	
Useful Contact(s)	
	• Isabelle Dargent

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