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MINGBIO - Introduction

Introduction

MINGBIO - Teaching profile

Learning outcomes

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 2020-2021

⊕ Periodic courses taught during 2020-2021

⊗ Optional

⊖ Periodic courses not taught during 2020-2021

■ Activity with requisites

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

Year

2 3

Content:

● Mineure en génie biomédical (30 credits)

● LGBIO1111	Biologie et physiologie cellulaire	Charles De Smet Christophe De Vleeschouwer Pascal Kienlen-Campard	30h+15h	5 Credits	q2	x	
● LGBIO1112	Introduction to biomedical engineering	Philippe Lefèvre	45h	5 Credits	q2	x	
● LGBIO1113	Anatomie et physiologie des systèmes	Catherine Behets Wydemans Olivier Cornu Greet Kerckhofs	30h+15h	5 Credits	q1		x
● LGBIO1114	Artificial organs and rehabilitation	Luc-Marie Jacquet Philippe Lefèvre Renaud Ronsse	30h+30h	5 Credits	q2		x
● LBIR1250	Biochemistry I	Michel Ghislain Yvan Larondelle (coord.)	30h+15h	5 Credits	q1		x
● LGBIO1115	Introduction aux neurosciences	Julie Duque (coord.) Aleksandar Jankovski Marcus Missal Sylvie Nozaradan	30h+30h	5 Credits	q2		x

COURSE PREREQUISITES

There are no prerequisites between course units (CUs) for this programme, i.e. the programme activity (course unit, CU) whose learning outcomes are to be certified and the corresponding credits awarded by the jury before registration in another CU.

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?"*

MINGBIO - Information

Access Requirements

Specific access 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

Curriculum Management

Entity

Structure entity

Denomination

Faculty

Sector

Acronym

Postal address

SST/EPL/GBIO

(GBIO)

Louvain School of Engineering (EPL)

Sciences and Technology (SST)

GBIO

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