

5.0 credits

45.0 h

2q

Teacher(s) :	Lefèvre Philippe ;
Language :	Français
Place of the course	Louvain-la-Neuve
Prerequisites :	No prerequisites
Main themes :	Introduction to (bio)-instrumentation, medical imaging, medical computer sciences, biological models, artificial organs, (bio)-materials, rehabilitation engineering, radiophysics, and clinical engineering.
Aims :	<p>Biomedical engineering is a pluridisciplinary field that finds its place at the interface between biomedical sciences and engineering sciences leading on to a multitude of applications. Thus, biomedical engineering is not only an important discipline subject to specific teachings in a constantly increasing number of universities, but also a domain quite difficult to apprehend at first glance. Therefore the main objective of the course is to present to the students whose interests lay in biomedical engineering an introduction to the discipline. In particular, the course should allow the students: - to understand, through a series of examples, the notions of (bio)instrumentation, (bio)material, artificial organs, medical imaging, clinical engineering, modelling of biological systems, etc. - to, later on, apply these concepts in order to solve elementary problems in the field of biomedical engineering.</p> <p><i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i></p>
Evaluation methods :	Oral exam
Teaching methods :	Materials: Transparencies
Content :	<p>Biomedical engineering is a pluridisciplinary field that finds its place at the interface between biomedical sciences and engineering sciences leading on to a multitude of applications. Thus, biomedical engineering is not only an important discipline subject to specific teachings in a constantly increasing number of universities, but also a domain quite difficult to apprehend at first glance. Therefore the main objective of the course is to present to the students whose interests lay in biomedical engineering an introduction to the discipline. In particular, the course should allow the students: - to understand, through a series of examples, the notions of (bio)instrumentation, (bio)material, artificial organs, medical imaging, clinical engineering, modelling of biological systems, etc. - to, later on, apply these concepts in order to solve elementary problems in the field of biomedical engineering.</p>
Cycle and year of study :	<p>> Master [120] in Chemical and Materials Engineering > Bachelor in Computer Science > Bachelor in Mathematics > Bachelor in Engineering</p>
Faculty or entity in charge:	GBIO