


3.00 credits

30.0 h + 7.5 h

Q1

Teacher(s)	Hermans Emmanuel (coordinator) ;
Language :	French
Place of the course	Bruxelles Woluwe
Prerequisites	<i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i>
Main themes	The following chapters are covered: Pharmacodynamics: theoretical concepts and experimental approaches. Qualitative and quantitative characterization of the interaction of drugs with their molecular targets in order to predict their biological effects on simple models or on the whole organism. Systematic study of the main inter and intracellular chemical signaling pathways governing the functioning of the organism. Systematic study of pharmacological targets (receptors, ion channels, enzymes). Basic notions of general pharmacotherapy: main principles of the study of drug activity and study of the risks related to pharmacological treatments.
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>At the end of this teaching entity, the student will have acquired knowledge of the basic concepts in pharmacology: 1. He will be able to define the main targets of the drugs and understand the methods used to determine their activity. 2. He will have an integrated vision of intracellular signaling pathways. 3. He will be able to understand the multiplicity of targets used or usable in pharmacology. 4. He will dispose of general notions concerning the use of medicinal products in human medicine and in particular the principle of studies leading to their validation.</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	<p>The assessment consists of a written exam. It may include short open-ended or essay questions possibly involving diagrams to be made or completed, as well as multiple-choice questions.</p> <p>The final mark will take into account the results of the different parts of the examination. It will be based on an arithmetic average that considers, among other things, the number of hours taught by each teacher. However, a minimum level of proficiency in all parts is essential to demonstrate the skills and knowledge defined in the learning outcomes of the teaching unit. In the event of a major failure in one of the parts, teachers may award the lowest mark, whether in the first or second session.</p>
Teaching methods	Teaching is based on lectures (total 30 h) and compulsory tutorials (7.5 h), during which students are will learn to understand and interpret pharmacological data from a scientific publication. They will also be required to explain the data, orally if necessary.
Content	<ul style="list-style-type: none"> - General pharmacodynamics: mechanisms of action of drugs; Quantitative study of the relationship between receptor binding and pharmacological response; Basic concepts on the identification, classification and regulation of receptors. - General pharmacotherapy: therapeutic index; Tolerance and drug dependence; side effects; Drugs interactions; Clinical evaluation of drugs: placebo effect, clinical trials. - Systematic description of pharmacological targets at the molecular level and their implications in various pathophysiological processes <p>The teaching is essentially based on the exploration of a large number of notions specific to pharmacology. Beyond a descriptive theoretical course, the notions are developed through concrete examples.</p>
Bibliography	Le support : la plupart des documents présentés aux cours sont accessibles sur Internet via la plateforme Moodle accessible aux membres de la communauté universitaire.
Other infos	<p>The student is supposed to have basics in general biology, general cytology and histology. It is highly desirable that the student has taken a course in cell physiology.</p> <p>Support: Most of the documents presented during the courses are accessible on the Internet via the UCLouvain Moodle site.</p> <p>Participation in practical work is compulsory and essential to validate the teaching unit. Any unjustified absence entails a penalty for the examination of the Teaching Unit which can go as far as the cancellation of the examination mark. for the year of study considered (0/20). In the event of absence, the teacher may propose to the jury to oppose registration for the examination relating to the Teaching Unit in accordance with article 72 of the RGEE</p>

Faculty or entity in charge	FASB
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Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Minor in Biomedicine (openness)	MINSBIM	3		
Bachelor in Biomedicine	SBIM1BA	3	WFARM1213S AND WSBIM1201	