


2.00 credits

15.0 h + 7.5 h

Q1

Teacher(s)	Hermans Emmanuel ;
Language :	French
Place of the course	Bruxelles Woluwe
Prerequisites	<p>WMD1120P (Biologie générale et approche expérimentale de la biologie), or equivalent. The following teaching units should have been already validated by the student or must be followed by the student during the same academic year as the present course.</p> <p>WFARM1221 (Biochimie et biologie) or equivalent WFARM1212 (Eléments de physiologie générale) or equivalent.</p> <p><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></p>
Main themes	<p>Pharmacodynamy : theoretical aspects and experimental approaches. Comprehensive overview of pharmacological targets (receptors, ionic channels, enzymes). Qualitative and quantitative characterisation of the interaction of drugs with these targets and description of the impact on physiology and opportunities for therapy. This course is documented with several examples of common drugs used in human medicine. Basic concepts in pharmacotherapy : main principles governing the study of drug action and uses as well as the risks related to pharmacological treatments.</p>
Learning outcomes	<p><b>At the end of this learning unit, the student is able to :</b></p> <p>By the end of this course, the students will possess a general knowledge of fundamental concepts in pharmacodynamy and pharmacotherapy : 1. Students will have an overview of the principal molecular targets of drugs, and will understand the methods used to evaluate the activity of drugs. 2. They will understand the fundamental aspects of the interactions between drugs and their targets 3. They will have an overview of the general rules concerning the use of drugs in human medicine. The aim of the course is to provide sufficient background for further study of all classes of drugs used in pharmacology (courses in Special Pharmacology and Pharmacotherapy)</p>
Evaluation methods	<p>Written exam consisting of multiple choice questions with reasoning as well as open-ended questions. The student will have to demonstrate the mastery of his knowledge and the understanding of the concepts and the evaluation is not limited to a restitution. The evaluation will thus relate in part to an interpretation of results of pharmacodynamic experiments.</p> <p>During the first presentation of the exam, the mark related to the practical work is integrated into the exam mark in order to constitute 10% of the overall mark.</p>
Teaching methods	<p>Lecture in audience (15 hours) including the teaching of theoretical notions, as well as the explanation of the analysis of the results of pharmacodynamic experiments. Concrete examples from the scientific literature are used to illustrate these analyses. Mandatory practical laboratory work (7.5 hours).</p>
Content	<p>General Pharmacology : mechanisms of action of drugs; quantitative study of drug-receptor interaction and related responses (potency and efficacy of drugs). Basic concepts of identification, classification and regulation of pharmacological targets. General Pharmacotherapy: therapeutic index; tolerance and pharmacodependance; secondary and unwanted effects of drugs; drug interactions; clinical evaluation of drugs: placebo effect, clinical studies. General description of pharmacological targets at the molecular level and their implication in diverse physiopathological processes. The course explores a large number of concepts specific to pharmacology. Beyond a theoretical description, several examples of drugs and their actions are explained.</p>
Bibliography	<p>Le support : l'essentiel des documents présentés aux cours sont accessibles sur Internet via la plateforme Moodle accessible aux membres de la communauté universitaire.</p>
Faculty or entity in charge	FARM

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Biomedical Engineering	GBIO2M	2		
Bachelor in Pharmacy	FARM1BA	2	WMD1120P	