

2.00 credits

20.0 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>
Learning outcomes	
Evaluation methods	<p>Written exam consisting of multiple choice questions with reasoning and short open-ended questions. The student will have to demonstrate mastery of his knowledge and understanding of the concepts.</p> <p>The number of questions will reflect the importance and the hourly volumes of each part (Pharmacodynamics 10h, Pharmacokinetics 10h and Toxicology 5h). The final mark will take into account a weighting of the results of each part, in connection with this number of hours. Note: for students who do not present the Toxicology section (WMDS1237D), the final mark combines the marks of the Pharmacodynamics and Pharmacokinetics parts in an equivalent manner.</p> <p>Any overall average less than 10/20 is rounded down to the nearest unit.</p>
Teaching methods	Presentation in lectures of concepts, principles and processes with illustrations from concrete examples of drugs commonly used in human medicine.
Content	<p>1. Introduction and general pharmacodynamics</p> <p>Mechanisms of action of drugs Types of receptors/targets Relationships between receptor binding and pharmacological response Variability of individual response Large therapeutic classes</p> <p>2. Pharmacokinetics.</p> <p>Reminder of the main concepts (compliance, absorption, distribution, metabolism and excretion) Description of the main physiological causes of inter-individual pharmacokinetic variability (Age [children, elderly], Pregnancy, Genetic polymorphisms, Drug and environmental interactions...) Description of the main pathological causes of inter-individual pharmacokinetic variability (Renal function, Liver function, Obesity, Evolution of the disease...)</p> <p>3. Toxicology</p> <p>Basic concepts in toxicology: exposure, dose, danger, risk Factors determining the toxic response to a xenobiotic Main mechanisms of toxicity Antidote concept</p>
Inline resources	The documents projected during the course are available on the Moodle platform. Reference books are suggested at the start of each part of the course.
Bibliography	<p>Goodman and Gilman's Pharmacological Basis of Therapeutics, Twelfth Edition, 2010</p> <p>Casarett and Doull's Toxicology - The basic science of poisons, 9th Edition, 2019</p> <p>Urs A. Boelsterli - Mechanistic Toxicology: The molecular basis of how chemicals disrupt biological targets, 2nd Edition, 2007</p>
Faculty or entity in charge	MED

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Dentistry	DENT1BA	2	WMEDE1112 AND WMDS1109	