UCLouvain

wmds1215

2024

Biochimie métabolique

6.00 credits	50.0 h	Q1

Teacher(s)	Bommer Guido ;Collet Jean-François (coordinator) ;					
Language :	French					
Place of the course	Bruxelles Woluwe					
Prerequisites	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.					
Learning outcomes						
Evaluation methods	Students will be evaluated on their ability to integrate biochemical concepts into a coherent synthesis. They must be able to describe, use and explain in precise biochemical terms the themes addressed in the course and how disease can be the result of molecular and biochemical dysfunction.					
	The written examination will consist in part of a multiple-choice questions and in part open-ended questions. For multiple choice questions with more than one correct option, the mark will only be attributed if all the correct responses have been selected. The number of correct options is stated clearly on the questionnaires. No negative marks will be allocated for blank or incorrect answers. The final mark is the arithmetic sum of the marks for the multiple-choice and open questions (in total 20 points). A final mark between 9/20 et 10/20 is not automatically rounded up to 10/20.					
	There are no negative points or weighting according to the questions and chapters of the course content. However, when a student has a final mark between 9/20 and 10/20 after correction, the lecturers review together the exam copy to decide whether the mark should be rounded down or up according to the overall evaluation of the copy.					
	Evaluation is based on the entire course content.					
Teaching methods	Formal lectures. The teaching will be conducted face-to-face.					
Content	The main objective of this course is a comprehensive understanding at the molecular level of chemical processes in living organisms. Therefore, this course on Metabolic Biochemistry constitutes the stepping stone for the course on Human Biochemistry. Content:					
	Principles of themodynamics					
	Structure, function and allostery					
	 Introduction to enzymes: enzymatic kinetics and catalytic mechanisms Principles of metabolic control 					
	• The glycolysis pathway					
	Glycogen metabolism The Krebs cycle					
	Electron transport and oxidative phosphorylation					
	Gluconeogenesis and the pentose phosphate cycle Metabolism of fatty acids, complex lipids and cholesterol					
	Metabolism of purine and pyrimidine bases					
	Amino acid metabolism Analysis of metabolism and metabolic control					
Inline resources	There is no formal syllabus! PDF versions of slides presented in the course, which cover the subject in a comprehensive way, will be made available on Moodle.					
Bibliography	Voet et Voet "Biochimie" 2e édition 2007, traduction de la 3e édition américaine par Guy Rousseau et Lione					
Dibliography	Domenjoud Textbook of Biochemistry with Clinical Correlations, 7ème édition, Thomas M. Devlin					
	Lehninger Principles of Biochemistry by David L. Nelson Michael Cox (7th or 8th edition)					
Faculty or entity in	MED					
charge						

Programmes containing this learning unit (UE)					
Program title	Acronym	Credits	Prerequisite	Learning outcomes	
Bachelor in Medecine	MD1BA	6	WMDS1111	Q.	