

6.00 credits

50.0 h

Q1

Teacher(s)	Bommer Guido ;Collet Jean-François ;Rider Mark (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>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.</p> <p>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 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.</p> <p>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.</p>
Teaching methods	<p>Formal lectures.</p> <p>The teaching will be conducted face-to-face or at distance exclusively or partially according to health restrictions.</p>
Content	<p>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.</p> <p>Content:</p> <ul style="list-style-type: none"> • Reminder of the principles of thermodynamics • Structure-function relationships of haemoglobin • Introduction to enzymes • Principles of enzyme kinetics • Enzyme mechanisms • Principles of metabolic control • Glycolysis • Glycogen metabolism • The tricarboxylate cycle (Krebs cycle) • Electron transport and oxidative phosphorylation • Gluconeogenesis and pentose phosphate pathway • Fatty acid, complex lipid and cholesterol metabolism • Purine and pyrimidine metabolism • Amino acid metabolism
Inline resources	<p>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 MoodleUCL (https://moodleucl.uclouvain.be/). In addition, a tablet will be used to explain certain aspects of the course. The "Tablet" PDF versions of the PowerPoint files will also be made available to students via MoodleUCL.</p>
Bibliography	<p>Voet et Voet "Biochimie" 2e édition 2007, traduction de la 3e édition américaine par Guy Rousseau et Lionel Domenjoud</p> <p>Textbook of Biochemistry with Clinical Correlations, 7ème édition, Thomas M. Devlin</p>
Faculty or entity in charge	MED

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