


3.00 credits

30.0 h

Q2

Teacher(s)	Bommer Guido ;Collet Jean-François ;Lemaigre Frédéric (coordinator) ;
Language :	French > English-friendly
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	The written examination will consist of open-ended question . Students will be evaluated on their ability to synthesize and integrate multiple biochemistry data into a coherent entity. They must be able to describe, use and explain in precise biochemical terms the topics addressed and how a disease can result from molecular and biochemical dysfunctions. 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 the overall evaluation of the copy.
Teaching methods	The teaching method consists of lectures given on site by the co-teachers, and includes examples and illustrations.
Content	The course complements and is an extension of the Metabolic Biochemistry course WMDS1215 taught to medical students, and of the courses on Biochemistry an Molecular Biology (WFARM1221) and Molecular Biology and Epigenetics (WSBIM1226) taught to biomedical students. The chapters include a description of normal biochemical mechanisms, as well as illustrations of disorders that cause human diseases. More specifically, the following topics will be addressed: <ul style="list-style-type: none"> <li>• Mechanisms controlling gene expression; microRNAs; circular RNAs</li> <li>• Principles of diseases resulting from a dysfunctional gene expression</li> <li>• Molecular mechanisms of carcinogenesis</li> <li>• Molecular mechanisms and diseases of hemoglobin</li> <li>• Normal and pathological metabolism of iron</li> <li>• Normal and pathological metabolism of heme</li> <li>• Biochemical mechanisms of blood coagulation</li> <li>• Lipoprotein metabolism</li> <li>• Métabolism of ethanol, fructose and galactose</li> <li>• Metabolism of glycoproteins and glycosamnioglycans</li> <li>• Glucose homeostasis</li> <li>• Integration of metabolism at the level of the organism.</li> </ul>
Inline resources	The slides presented during the course, which cover the subject in a comprehensive way, are available on <a href="http://moodleucl.uclouvain.be/">http://moodleucl.uclouvain.be/</a>
Bibliography	D.R. Ferrier. Biochemistry. Lippincott's Illustrated Reviews, Wolters Kluwer, 2017 Principles of Biochemistry, Horton R.H., Prentice Hall Textbook of Biochemistry with Clinical Correlations, 7ème édition, Thomas M. Devlin, Wiley
Faculty or entity in charge	MED

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Medecine	<a href="#">MD1BA</a>	3	<a href="#">WMDS1111</a>	
Bachelor in Biomedicine	<a href="#">SBIM1BA</a>	3	<a href="#">WFARM1213S</a> AND <a href="#">WFARM1221S</a> AND <a href="#">WSBIM1227</a> AND <a href="#">WFARM1282</a> AND <a href="#">WFARM1247</a> AND <a href="#">WSBIM1201T</a> AND <a href="#">WSBIM1201P</a>	