


4.00 credits

37.5 h

Q1

Teacher(s)	Henriet Patrick ;
Language :	French
Place of the course	Louvain-la-Neuve
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>
Main themes	<p>Cellular functioning is approached as an open thermodynamic system whose fundamental characteristic is to exchange matter and energy with the environment. The main themes covered are: the most general physical laws and the properties specific to living matter that govern these exchanges, the various signals that enable the exchange of information between cells, but also within the cell itself, cellular motors and more particularly the contraction of the skeletal muscle cell.</p> <p>The second part deals with the metabolic pathways involved in energy supply and how they are regulated.</p>
Learning outcomes	<p><b>At the end of this learning unit, the student is able to :</b></p> <ul style="list-style-type: none"> <li>• Demonstrate knowledge and understanding of the functional characteristics common to all eukaryotic cells (2.1, 11.1 Kine / 9.1 EP)</li> <li>• Demonstrate knowledge and understanding of the structure of the striated muscle cell and the mechanics of contraction (5.3, 11.1, 11.2 Kine/ 9.1 and 9.2 EP)</li> <li>• Demonstrate knowledge and understanding of metabolic pathways (5.3, 11.1, 11.2 Kiné/ 9.1 and 9.2 EP)</li> <li>• Use the concepts learned in the course to solve practical problems (5.3 Kiné / 9.3 EP)</li> </ul>
Evaluation methods	Evaluation: 2-hour written exam
Teaching methods	Lectures, for a large audience (theory and exercises)
Content	<p>In cell physiology, cellular functioning is approached as an open thermodynamic system whose fundamental characteristic is to exchange matter and energy with the environment. The main topics covered are: the most general physical laws and properties specific to living matter that govern these exchanges, the various signals that enable the exchange of information between cells, but also within the cell itself, cellular motors and, more specifically, the contraction of skeletal muscle cells.</p> <p>In biochemistry, the main topics covered are metabolic pathways (anabolism and catabolism) and their modes of regulation.</p>
Other infos	This course is reserved for FSM students. Access is possible to other UCLouvain students on the basis of an application to be submitted to the course coordinator.
Faculty or entity in charge	FSM

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Motor skills : General	<a href="#">EDPH1BA</a>	4	<a href="#">LFSM1101</a> AND <a href="#">LFSM1104</a>	
Bachelor in Physiotherapy and Rehabilitation	<a href="#">KINE1BA</a>	4	<a href="#">LFSM1101</a> AND <a href="#">LFSM1104</a>	