



**This learning unit is not open to incoming exchange students!**

Language :	French
Place of the course	Charleroi
Prerequisites	<p>LSINC1131 and LSINC1132</p> <p>This course assumes that you have acquired the basic notions of biology and chemistry:</p> <p>General necessary prerequisites of Biology:</p> <p>General Biology course as described in the EU "Biology", in particular the chapters dedicated to the molecules of life</p> <p>Necessary general prerequisites of Chemistry:</p> <p>Atomic orbitals, chemical bonds, the structure of water and its properties, pH and osmolarity, redox potentials, functional groups of living organisms and the properties they confer on a carbon molecule.</p> <p>Chemical reactions: basic principles (stoichiometry, equilibrium, free energy), condensation/polymerization reactions, oxidation-reduction.</p> <p><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></p>
Main themes	<p>This teaching unit revolves around</p> <ol style="list-style-type: none"> <li>1) proteins in general (structure-function relationship, enzymatic activity, regulations, proteomics),</li> <li>2) notions of metabolism</li> </ol>
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>• perceive the structure-function relationship at the protein level</li> <li>• understand the role of enzymes in the catalysis of chemical reactions and understand the significance of the classic enzymatic parameters characterizing an enzyme</li> <li>• perceive the different levels of regulation making it possible to adjust the abundance and activity of an enzyme in a particular cellular context</li> <li>• understand what homeostasis means and the basic principles of cellular metabolism</li> <li>•</li> </ul>

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Additional module in life sciences and health for computer scientists	APPSCVS	5		