

Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).



3 credits

30.0 h + 10.0 h

Q2

Teacher(s)	Dumont Patrick ;Gofflot Françoise (coordinator) ;Rezsohazy René ;
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>The "Integrated Animal Biology" courses aim to give students an integrated and multidisciplinary view of the major systems of functioning of animal organisms. The aim of these courses is to study the functioning of large systems, focusing on mammals with a clear predominance for the human species, but without neglecting the criteria for the evolution and adaptation of systems according to the type of organism.</p> <p>The systems studied in this third module of "integrated animal biology" are the circulatory system, the respiratory system, the digestive system and the urinary system. In the lectures, for each system, we will describe the topographical structures and morphological characteristics; identify cell populations and their histological characteristics; explain basic physiological concepts; and establish the links between morphological/histological elements and the performance of various functions.</p> <p>During the practical work, students will have the opportunity to analyse and compare the anatomy of all the systems seen in the three modules of "integrated animal biology" through dissections of different animal models.</p>
Aims	<ul style="list-style-type: none"> <li>• describe the anatomical and topographical structure of the 4 biological systems covered in the course ;</li> <li>• identify the cell populations and their histological characteristics;</li> <li>• demonstrate an understanding of the general principles of the functioning of the 4 biological systems covered in the course;</li> <li>• make the links between the structures and functions of the 4 biological systems;</li> <li>• understand the pathophysiological dysfunctions of the 4 systems studied;</li> <li>• establish the links between the functioning of an organism and its environment;</li> <li>• to identify and compare the anatomical structure of the different systems seen in the "integrated animal biology" courses on different vertebrate animal models.</li> </ul> <p>-----</p> <p><i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i></p>
Evaluation methods	<p><b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b></p> <p>Oral examination (theory and practical work)</p>
Teaching methods	<p><b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b></p> <p>Lectures and practical work</p>
Content	<p>For the circulatory system:</p> <ul style="list-style-type: none"> <li>• comparative anatomy and fundamental processes</li> <li>• core, structure and functions</li> <li>• the vessels: arteries, microcirculation, veins</li> <li>• regulation of the circulatory system</li> </ul> <p>For the respiratory system:</p> <ul style="list-style-type: none"> <li>• comparative anatomy and fundamental processes</li> <li>• topographical and histological anatomy of the respiratory tract</li> <li>• gas exchanges: processes and regulation</li> </ul> <p>For the digestive system</p> <ul style="list-style-type: none"> <li>• comparative anatomy and fundamental processes</li> <li>• general structure of the digestive tract</li> <li>• structure-function links of the different segments</li> <li>• Ancillary glands: liver and biliary tract, pancreas</li> </ul>

	<p>For the excretory system</p> <ul style="list-style-type: none"> <li>• urinary tract morphology</li> <li>• the kidney: structure-function links of the different segments</li> <li>• urine formation: basic processes and regulation</li> <li>• water and electrolyte balance</li> <li>• the urinary tract</li> </ul> <p>The organs/structures of the different systems taught in the lectures will be observed and compared during the dissection sessions of different animal models.</p>
<p>Bibliography</p>	<p>Atlas d'Histologie Fonctionnelle de Weather                  Principes d'Anatomie et de Physiologie, Tortora                  Biologie humaine. Anatomie et physiologie, E. Marieb                  Physiologie Humaine. Sherwood                  Review of Medical physiology, W.F. Ganong                  Physiologie animale, R. Gilles</p>
<p>Other infos</p>	<p>Attendance at the practical work is mandatory. Any unjustified absence will be sanctioned.</p>
<p>Faculty or entity in charge</p>	<p>BIOL</p>

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Biology	<a href="#">BIOL1BA</a>	3	<a href="#">LBIO1234A</a>	
Minor in Biology	<a href="#">MINBIOL</a>	3		
Master [120] in Biochemistry and Molecular and Cell Biology	<a href="#">BBMC2M</a>	3		