

Module name	<b>Animal physiology – an extensive course</b>
Module code	B-B.016Eng
ISCED code	0511: Biology
Study cycle	I <sup>o</sup>
Semester	winter
Responsible for this module	Prof. dr hab. Piotr Właż Department of Animal Physiology and Pharmacology email: piotr.wlaz@poczta.umcs.lublin.pl
Language of instruction	English
Website	
Prerequisites	
ECTS	7,5
ECTS points hour equivalents	Contact hours (work with an academic teacher) – ..... - lectures: 30 - labs: 60 Non-contact hours (students' own work) – 125 preparation for the exam: 50 - preparation for labs: 25 - preparation of reports from laboratory exercises: 25 - literature study: 25  <b>Total number of ECTS points for the module – 7,5</b>
Learning outcomes verification methods	Method of verifying the learning outcomes of the first-cycle studies approved on the basis of Resolution of the Senate of Maria Curie-Skłodowska University No. XXII-39.6 / 12 of April 25, 2012, i.e. from the 2012/13 education cycle: Lecture - written exam: W1-W3, U1-U3, K2 Laboratories - tests: W1-W3, U1-U3, K2 Laboratories - active participation in classes: W1-W3, U1-U3, K1-K2  Method of verifying the learning outcomes of the first-cycle studies approved on the basis of Resolution of the Senate of Maria Curie-Skłodowska University No. XXIV-27.18/19 of May 29, 2019 i.e. from the 2019/20 education cycle: Lecture - written exam: W1-W3, U1-U3, K2 Laboratories - tests: W1-W3, U1-U3, K2 Laboratories - active participation in classes: W1-W3, U1-U3, K1-K2
Course full description	The subject is to familiarize the student with physiological processes occurring in animal organisms. Issues related to tissue excitability, nerve and nervous system physiology, hormonal regulation of life processes, cardiac and cardiovascular function, the structure and functions of the human respiratory, digestive and excretory systems, and blood physiology will be discussed.  The lecture covers the following topics: 1. Excitability, nerve physiology, synapses. 2. Physiology of the central nervous system: - characteristics of individual brain structures - spinal cord characteristics - reflex activity

	<p>- the role of the central nervous system in the regulation of the functions of individual organs of the body</p> <ol style="list-style-type: none"> <li>3. Characteristics of the autonomic and peripheral nervous system.</li> <li>4. Physiology of sense organs.</li> <li>5. Movement and body posture.</li> <li>6. Endocrine system.</li> <li>7. Structure and physiology of the digestive system.</li> <li>8. Structure and physiology of the respiratory system.</li> <li>7. Kidney physiology.</li> </ol> <p>The laboratories cover the following topics:</p> <ol style="list-style-type: none"> <li>1. Blood physiology.</li> <li>2. Stimulus properties, tissue excitability.</li> <li>3. Skeletal and smooth muscle physiology.</li> <li>4. Reflex activities of the body.</li> <li>5. Physiology of sense organs.</li> <li>6. Cardiovascular function and regulation.</li> <li>7. Breathing physiology.</li> </ol>
Bibliography	<p>Ganong's Review of Medical Physiology, K. Barrett, S. Barman, S. Boitano, H. Brooks; McGraw-Hill Education, 2015.</p> <p>Animal Physiology, R. W. Hill, G. A. Wyse, M. Anderson, Oxford University Press, 2017.</p>
Learning outcomes	<p>On the basis of Resolution of the UMCS Senate No. XXII-39.6/12 of 25 April 2012, i.e. from the 2012/2013 education cycle:</p> <p><b>KNOWLEDGE:</b></p> <p>W1. Student describes the basic life processes occurring in human and animal organisms at the cellular, organ, systemic and inter-systemic level. K_W01, K_W04, K_W05, K_W07, K_W11</p> <p>W2. Student characterizes the activities of individual organs and organ systems. K_W01, K_W04, K_W05, K_07, K_W11</p> <p>W3. Student explains the concepts of homeostasis, health and disease of the body. K_W01, K_W11, K_U01</p> <p><b>SKILLS:</b></p> <p>U1. Student selects the appropriate methods for observing the activities of animal organisms. K_U01, K_02, K_U04</p> <p>U2. Student analyzes and interprets the results of conducted experiments and formulates conclusions. K_U05, K_U06, K_U07, K_U08, K_W11</p> <p>U3. Student applies his knowledge in preventive medicine, promoting a healthy lifestyle. K_W07</p> <p><b>SOCIAL COMPETENCE:</b></p> <p>K1. Student presents a pro-health attitude. K_K10, K-K11</p> <p>K2. Student needs to update knowledge of the mechanisms of animal functioning. K_K01, K_K02, K_K03, K_K04</p> <p>On the basis of Resolution of the UMCS Senate No. XXIV-27.18 / 19 of 29 May 2019, i.e. from the 2019/2020 education cycle:</p> <p><b>KNOWLEDGE:</b></p> <p>W1. Student describes the basic life processes occurring in human and animal organisms at the cellular, organ, systemic and inter-systemic level K_W01, K_W03, K_W04</p>

	<p>W2. Student characterizes the activities of individual organs and organ systems K_W01, K_W04</p> <p>W3. Student explains the concepts of homeostasis, health and disease of the body. K_W01</p> <p><b>SKILLS:</b></p> <p>U1. Student selects the appropriate methods for observing the activities of animal organisms. K_U01, K_U02, K_U03, K_U04, K_U07, K_U08</p> <p>U2. Student analyzes and interprets the results of conducted experiments and formulates conclusions. K_U01, K_U02, K_U03, K_U04, K_U08, K_W11</p> <p>U3. Student applies his knowledge in preventive medicine, promoting a healthy lifestyle. K_U05</p> <p><b>SOCIAL COMPETENCE:</b></p> <p>K1. Student presents a pro-health attitude. K_K01, K_K03,</p> <p>K2. Student needs to update knowledge of the mechanisms of animal functioning. K_K02, K_K06</p>
Practice	<p>Determination of:</p> <ul style="list-style-type: none"> <li>- hematocrit</li> <li>- hemoglobin level</li> <li>- red blood cells</li> <li>- white blood cells</li> <li>-erythrocyte sedimentation</li> </ul> <p>Blood groups testing</p> <p>ECG</p>
Teaching methods	<ul style="list-style-type: none"> <li>- laboratory exercises</li> <li>- movie</li> <li>- explanation</li> <li>- story</li> <li>- show</li> <li>- lecture</li> <li>- computer work</li> </ul>