

Module code	M_WE_SEM2 PW 1A/2A NEUROBIOL
Field of study	Veterinary medicine
Module name, also the name in English	Elements of neurobiology Elementy neurobiologii
Language of instruction	English
Module type	optional
Level of studies	Long-cycle master's degree studies
Form of study	Full-time
Year of study in the field of study	I
Semester of study in the field of study	2
ECTS credits, divided into contact/non-contact hours	1 (0.6/0.4)
Academic title/degree, name of the person responsible for the module	Dr Karol Rycerz
Unit teaching the module	Department of Animal Anatomy and Histology
Module objective	Introduction to the basic issues in the field of development of the pre- and postnatal nervous system of mammals, organisation of the nervous system, structure of selected areas of the human brain and spinal cord, nerve ganglia, the structure of the blood-brain barrier, ventricular system and the meninges. The content of the module is an introduction to the implementation of further stages of studies and is related to theoretical and clinical subjects in veterinary medicine.
The learning outcomes for the module include a description of the knowledge, skills and social competences that the student will gain after completing the module.	<p>Knowledge:</p> <p>K1. The student knows and is able to describe the anatomical structures of the central and peripheral nervous systems of mammals and is able to characterise the correlations between them.</p> <p>K2. The student knows and is able to describe the structure of the blood-brain barrier, ventricular system, meninges, and the flow of the cerebrospinal fluid.</p> <p>K3. The student knows and is able to describe the stages of development of the nervous system of mammals, its postnatal organisation and the process of neurogenesis in adult individuals</p> <p>K4. The student is familiar with the terminology of neuroscience</p> <p>Skills:</p> <p>S1. The student knows how to use microscopes to independently recognise the microscopic structure of selected areas of the central and peripheral nervous system</p> <p>S2. The student uses nomenclature in the field of neurobiology</p> <p>S3. The student demonstrates an understands the need and necessity of self-education in the field of neuroscience</p> <p>Social competences:</p> <p>Sc1 The student has the habit of constant deepening of his/her knowledge in the field of neurobiology</p>

Prerequisites and additional requirements	None
Module program content	<p>The classes are conducted in the form of exercises, the topics of which include the development of the nervous system of mammals, the process of neurogenesis, organisation of the nervous system, structure of the ventricular system, choroid plexus, cerebral meninges, circulation of cerebrospinal fluid, the structure of the blood-brain barrier, the structure of the cerebral cortex, hippocampus, amygdala, medulla oblongata (thalamus, hypothalamus, pineal gland), basal nuclei, brainstem structures (midbrain, pons, medulla oblongata), cerebellum, nerve ganglia. The course is based on microscopic analysis of histological specimens and the structure of limbic and reticular system of the brain.</p>
List of core and supplementary literature	<ol style="list-style-type: none"> <li>1. Basic Clinical Neuroscience, 3rd Edition, Paul A. Young, Paul H. Young, Daniel L. Tolbert, Lippincott Williams &amp; Wilkins, 2015.</li> <li>2. Netter's Atlas of Neuroscience, 3rd Edition, David L. Felten, Michael K. O'Banion, Mary E. Maida, Elsevier Inc., 2015.</li> <li>3. BRS Neuroanatomy, 6th Edition, Douglas J. Gould, Lippincott Williams &amp; Wilkins, 2019.</li> </ol>
Planned forms/activities/teaching methods	<p><u>Auditory section</u> based on author's multimedia presentations and discussion.</p> <p><u>Laboratory exercises</u> based on analysis of microscopic histology slides and discussion.</p> <p><u>Individual or group consultations</u> conducted outside of scheduled classes.</p>
Verification methods and ways of documenting the achieved learning outcomes.	<p>Knowledge:</p> <p>Final test in the form of a single-choice test (15 questions/1 point - 1 question).</p> <p>Final credit evaluation criteria:</p> <p>14 - 15 correct answers - 5.0 (bdb)</p> <p>13 correct answers - 4.5 (db+)</p> <p>12 correct answers - 4.0 (db)</p> <p>11 correct answers - 3.5 (dst+)</p> <p>9 - 10 correct answers - 3.0 (dst)</p> <p>0 - 8 correct answers - 2.0 (ndst)</p> <p>Students can re-take the test twice after its failure, final credit according to the same policy.</p> <p>In the event of an excused absence on the final test, the student does not lose the opportunity to take the test. An unexcused absence is equivalent to forfeiting the date.</p> <p>Only students who receive a failing grade of 2.0 on the first due date will be allowed to the re-sit date.</p> <p>Skills: assessment of the student's independent work during microscopic analysis of histological preparations and discussion during classes.</p> <p>Competences: discussion during the classes.</p>

ECTS credits	Form of classes	Number of contact hours	ECTS credits
	classes	15	0.4
	Consultations	2	0,1
	Credit pass/resit exam	2	0.1
		Number of non-contact hours	
	Preparation for classes	7,5	0.3
	Literature study	1	0.05
	Preparation for examination	1	0.05
	Total	28,5	1
The workload of activities that requires direct participation of an academic teacher	<p>- participation in recitation section and laboratory classes - 15 hours</p> <p>- participation in consultations - 2 hours</p> <p>- attendance for credit – 2 hours</p> <p>A total of 19 hours, which is equivalent to 0.6 ECTS credits</p>		
Relation of module learning outcomes to course learning outcomes.	<p>K1 – A.W1. +++, A.W2. +++</p> <p>K2 – A.W1., ++ A.W2. ++</p> <p>K3 – A.W3. +++</p> <p>K4 – A.W20. ++</p> <p>S1 – A.U8. +++</p> <p>S2 – A.U21. ++</p> <p>Sc1 – K5 +</p> <p>Sc2 – K8 +</p>		
Elements and values affecting the final grade	Final credit represents 100% of the final grade (according to the final credit evaluation criteria).		