Code of subject	M_WE SEM4 PW 1C-2C NEURO
Field of study	Veterinary medicine
Name of the training module including the Polish name	Neurophysiology Neurofizjologia
Language of instruction	English
Type of the training module	elective
Level of the training module	Master level
Form of studies	Full-time/part-time
Location in the programme (year)	II
Location in the programme (semester)	IV
Number of ECTS credits	1 (0,7/03)
Name and surname of the person in charge	dr hab. Iwona Puzio
Unit offering the subject	Department of Animal Physiology
Aim of the module	To acquaint students with the neurophysiological mechanisms of animal behavior and methods of studying the structure and function of the nervous system
The learning outcomes for the module are a description of the knowledge, skills and social competences that the student will achieve after completing the course.	Konwledge
	K1. has knowledge of animal behavior based on the structure of the CNS and neurophysiological regulatory mechanisms
	K2. knows the methods of studying the structure and functions of the nervous system
	Skills
	S1. can describe the neurophysiological phenomena accompanying cognitive, emotional and drive activity, pain perception and use this knowledge to interpret abnormalities in animals
	Competences:
	Sc1. is ready to constantly update knowledge in the field of neurophysiology
Preliminary and additional requirements	-
Contents of the training module	Selected issues in neurobiology and developmental neurophysiology – development of nervous system, determining the cellular phenotype, creating topographic maps in the nervous system, synaptogenesis, neurotrophic factors. Sexual dimorphism of the brain - hormonal and neuroanatomical conditions, physiological consequences. Neurophysiological basis of emotional activities. The influence of various substances on the excitability of the reward system. Physiological basis of animal behavior. Neurophysiological mechanisms of aggression and defense activities. Hormones and behavior. Behavioral disorders resulting from inappropriate functioning of synapses and selected synaptic transmission systems. Methods of studying the relationship between the nervous system and behavior: their possibilities and limitations. Brain and immunity. Pain neurophysiology. Methods of

	studying the structure and function of the nervous system.
Recommended and obligatory reading list	1. Principles in Neurobiology. Luo Liqun, Taylor and Francis Inc 2. Principles of Neural Science. Eric R. Kandel, James H. Schwartz, Thomas M. Jessell, Steven A. Siegelbaum, A. J. Hudspeth, McGraw-Hill Education/Medical 3. Scientific reports
The intended forms/activities/ teaching methods	Multimedia presentations, films, lectures
Methods of verification and documentation forms of the achieved learning outcomes	K1, K2 - preparation of a lecture or multimedia presentation on a selected topic (grade 2-5), final written test (assessment in accordance with FEQS). S1 -final written test, discussion. Sc1 - active participation in classes, participation in discussions
Balance of ECTS credits	**Contact hours:** exercises - 15 hours consultation - 2 hours final credit - 1 hour Total 18 hours - 0.7 ECTS **Non-contact hours:** Preparation of a paper or multimedia presentation - 3 hours. reading recommended literature - 1 hour, preparation for the final test - 5 hours. Total 8 hours - 0.3 ECTS The total student workload is 27 hours which corresponds to 1 ECTS
Number of contact hours	participation in exercises - 15 hours consultation - 2 hours final credit - 1 hour Total 18 hours - 0.7 ECTS
Relationship between subject learning outcomes and veterinary studies learning outcomes	K1 - AW1, AW2, AW9+ K2 – BW4 + S1 – AU4, AU7+ Sc1 – K8 +++
Impact of selected compounds to final grade	Preparation of a lecture or presentation - 50% Final pass (written test) - 50%