

**Subject card**

<b>Subject name and code</b>	Principles of neuroanatomy, PG_00203438						
<b>Field of study</b>	Medical Biology						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2027/2028		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	2	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	3	<b>ECTS credits</b>			1.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			exam		
<b>Conducting unit</b>	Laboratory of Neurophysiology and Neurochemistry -> Department of Animal and Human Physiology -> Faculty of Biology -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Witold Żakowski				
	Teachers						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	15		2.0		8.0	25
<b>Subject objectives</b>	1. Students will learn the detailed structure of the human nervous system. 2. Demonstrating the primary role of the nervous system in controlling human vital functions. 3. Acquiring the skills to independently deepen and transfer knowledge.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_W16] has an advanced knowledge of the experimental methods and the most important techniques of biological sciences that can be applied to medical biology and diagnostics	explains the theoretical basis of experimental methods and lists the most important neurobiological techniques that can be used in research on the nervous system	[SW4] test/exam - oral or written
	[BIOLMEDL3_W03] has an advanced knowledge and understanding of the structure of the animal or human organism, the processes and functional relationships at the cellular, tissue, organ and organismal levels, and explains their relationship to behavior and adaptation of the organism to changing environmental conditions	knows the structure of the human nervous system and functional relationships at the tissue and organ level, and explains the relationship with behavior	[SW4] test/exam - oral or written
	[BIOLMEDL3_W07] has advanced knowledge of medical biology and is familiar with the health sciences terminology	has advanced knowledge of human neuroanatomy and knows the neuroscientific terminology	[SW4] test/exam - oral or written
[BIOLMEDL3_K01] understands the need for lifelong learning and to update his/her knowledge of medical biology and related disciplines	understands the need for lifelong learning and updating knowledge of human neuroanatomy	[SK8] observation of student's independent or team work	
Subject contents	Basics of human ontogenetic development. Division of the nervous system into the central and peripheral parts. Levels of integration in the central nervous system. Functional localization in the cerebral cortex. Nerve pathways of selected systems: sensory and motor, visual, auditory and balance. The hypothalamus as an integrator of the functions of the somatic, hormonal, limbic and autonomic systems. Telencephalic nuclei. Reticular system. Features of cerebral circulation. Transmitter systems of the central and peripheral nervous system.		
Prerequisites and co-requisites	Basic knowledge of human anatomy and physiology. Introductory classes/lectures: Human functional anatomy.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Exam	51.0%	100.0%
Recommended reading	Basic literature	1. Narkiewicz O., Moryś J., 2003. Neuroanatomia czynnościowa i kliniczna. PZWL, Warszawa. 2. Gołąb B., 2014. Anatomia czynnościowa ośrodkowego układu nerwowego. 3. Fix J., Neuroanatomia, Urban & Partner, Wrocław 1997. 4. Felten D. L., Shetty A. N., 2012. Atlas neuroanatomii i neurofizjologii Nettera. Elsevier Urban & Partner	
	Supplementary literature	1. Nolte J., 2011. Mózg człowieka. Anatomia czynnościowa mózgowia. Elsevier Urban & Partner 2. Lewandowska D., Orzeł-Gryglewska J., Jurkowlaniec E. [red], 2019. Fizjologia zwierząt i człowieka. Wydawnictwo UG, Gdańsk.	
	eResources addresses		
Example issues/ example questions/ tasks being completed	1. Macroscopic structure of the nervous system 2. Meninges, ventricles and cerebrospinal fluid 3. Vascularization of the central nervous system 4. Development of the nervous system 5. Neurohistology 6. Detailed neuroanatomy. 7. Sensory and motor systems 8. Neurotransmitter systems		
Work placement	Not applicable		

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