

Subject card

Subject name and code	Principles of neuroanatomy, PG_00154575						
Field of study	Medical Biology						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	3		ECTS credits		1.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Laboratory of Neurophysiology and Neurochemistry -> Department of Animal and Human Physiology -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Witold Żakowski				
	Teachers						
Lesson types	Lesson type	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						
Learning activity and number of study hours	Learning activity	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
Subject objectives	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] explains the theoretical basis of experimental methods and lists 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_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		
	[BIOLMEDL3_W03] knows 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		

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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