University of Gdańsk

Subject card

Subject name and code	Principles of neuroanatomy, PG_00203438		
Field of study	Medical Biology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
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_W04] has advanced knowledge of medical biology and its latest developments, and is familiar with and understands issues related to the role of medical biology in human health care	has advanced knowledge of human neuroanatomy and knows the neuroscientific terminology	[SW4] test/exam - oral or written
[BIOLMEDL3_K01] is aware of the importance of lifelong learning and keeping up to date with developments in medical biology and related disciplines, and applies this knowledge to the planning and design of professional activities	understands the need for lifelong learning and updating knowledge of human neuroanatomy	[SK8] observation of student's independent or team work
[BIOLMEDL3_W10] has an advanced understanding of the principles of assessing processes and phenomena occurring within the body, using physical or chemical measurements, and possesses advanced knowledge of experimental methods and the key techniques of the biological sciences that may be applied in 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_W02] has an advanced knowledge and understanding of the structure of the animal or human body, processes and functional relationships at the cellular, tissue, organ and organismal levels, as well as physiological and biochemical processes at an advanced level, and the mechanisms of the pathophysiology of diseases, and explains their relationship with behaviour and the organism’s	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

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 nerowowego. 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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