University of Gdańsk

Subject card

Subject name and code	Biological mechanisms of human behavior - lecture, PG_00138140		
Field of study	Criminology		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	3.0
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 Grażyna Jerzemowska	
	Teachers	dr Grażyna Jerzemowska	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	0.0	0.0	0.0	0.0	30

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	30	0.0	45.0	75

Subject objectives	Understanding human behavior in the context of the functioning of the central and peripheral nervous system.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[KRYML3_UW06] He/she can see and analyze moral and legal dilemmas in professional work.	[6922] [KRYML3_UW06] The student can notice and analyze dilemmas related to human behavior and associate them with incorrect functioning of the CNS.	[SU4] test/exam - oral or written
	[KRYML3_UU03] He/she can acquire knowledge independently and develop his/her professional skills, using various sources (in native and foreign language) and modern technologies.	[6919] [KRYML3_UU03] The student can independently acquire knowledge about behaviorism and develop professional observation skills using various sources (in native and foreign languages) and modern research on the structure of the CNS, neurological disorders, and their impact on human behavior.	[SU4] test/exam - oral or written
	[KRYML3_WG07] He/she has elementary knowledge of the man as the subject establishing social structures and the principles of their operation, as well as about the man as an individual functioning in these structures.	[6912] [KRYML3_WG07] The student has elementary knowledge about man as an entity constituting social structures and the principles of their functioning, as well as about man as an individual functioning in these structures.	[SW4] test/exam - oral or written
	[KRYML3_KK06] He/she is aware of the need to expand competences and professional qualifications and is able to set the direction of his/her own development and education independently.	[6931] [KRYML3_KK06] The student is aware of the need to expand professional competencies and qualifications regarding knowledge about "brain and behavior", as well as improve skills and can independently set the direction of his or her development and education.	[SK4] test/exam - oral or written
	[KRYML3_WG03] The graduates knows the basic terminology and basic concepts of psychology and sociology in the disciplines related to the field of study.	[6903] [KRYML3_WG03] The student knows the basic terminology and fundamental concepts in the biological mechanisms of human behavior related to the field of study.	[SW4] test/exam - oral or written
	[KRYML3_UW01] The graduate can observe and interpret social phenomena, analyzes their relations with various areas of criminology.	[6917] [KRYML3_UW01] The student can observe and interpret human individual behavior and analyze its connections with various areas of criminology.	[SU4] test/exam - oral or written
	[KRYML3_UW05] He/she is able to use legal and professional principles and standards of law and profession in his/her work as a criminologist.	[6921] [KRYML3_UW05] The student can use legal and professional principles and norms as a criminologist to assess individual behavior.	[SU4] test/exam - oral or written
	[KRYML3_UK08] The graduate is able to communicate using various channels and communication techniques with specialists in the field of psychology, as well as with recipients outside the group of specialists, using modern technological solutions.	[6924] [KRYML3_UK08] Using modern technological solutions, the student can communicate using various channels and techniques with neurobiology and behavior specialists and recipients outside the specialist group.	[SU4] test/exam - oral or written
	[KRYML3_UU02] He/she can use basic theoretical knowledge in the field of criminology and related disciplines in order to analyze, interpret and solve problems related to criminology.	[6918] [KRYML3_UU02] The student can use basic theoretical knowledge in the field of biological mechanisms of human behavior and related scientific disciplines to analyze, interpret, and solve problems related to the incorrect functioning of the CNS and its impact on behavior.	[SU4] test/exam - oral or written
	[KRYML3_UW04] The graduate has in-depth skills of observing, diagnosing, rationally assessing complex psychological situations and analyzing motives and patterns of human behaviour.	[6920] [KRYML3_UW04] The student has in-depth skills in observing, diagnosing, rationally assessing complex psychoneurobiological situations, and analyzing motives and patterns of human behavior.	[SU4] test/exam - oral or written

Course outcome	Subject outcome	Method of verification
[KRYML3_UK02] He/she is prepared to participate actively in groups, organizations and institutions related to criminology broadly understood, especially prevention and combating of crime, and at the same time he/she is able to communicate with people who are not specialists in criminology.	[6927] [KRYML3_UK02] The student is prepared to actively participate in groups, organizations, and institutions related to broadly understood criminology and can communicate with people who are/are not specialists in criminology, e.g., with specialists in medicine, neurobiology, and behaviorism.	[SK4] test/exam - oral or written
[KRYML3_WG06] The graduate demonstrates elementary knowledge and knows the concepts describing the most important social and psychological phenomena related to the field of study.	[6911] [KRYML3_WG06] The student has elementary knowledge of the structure of the brain and knows the concepts describing the most important neural mechanisms related to human behavior in the field related to the field of study.	[SW4] test/exam - oral or written
[KRYML3_KR07] The graduate is ready to take up professional challenges and is characterized by persistence in the implementation of individual and team activities in the field of criminology and related disciplines.	[6932] [KRYML3_KR07] The student is ready to take up professional challenges in observing and analyzing behavior and persisting in individual and team activities in criminology and related sciences, such as behaviorism and neurobiology.	[SK4] test/exam - oral or written
[KRYML3_UW07] He/she has the ability to understand and analyze social phenomena and use this analysis in professional work.	[6923] [KRYML3_UW07] The student can understand and analyze social phenomena in the context of individual behavior and use this analysis in professional work.	[SU4] test/exam - oral or written
[KRYML3_KK01] The graduate is aware of the level of his/her knowledge and skills and understands the need for lifelong learning.	[6926] [KRYML3_KK01] The student is aware of the level of his knowledge about the biological mechanisms of human behavior and his ability to observe these behaviors. He also understands the need to learn and deepen his knowledge throughout his life.	[SK4] test/exam - oral or written

Subject contents

1) Biological mechanisms of human functioning (genetics and behavior; theory of evolution; ethology; eugenics), 2) Structure and development of the nervous system (nerve cells; electrophysiology; CNS: structure of the telencephalon, diencephalon, midbrain, hindbrain; peripheral nervous system), 3) Physiology of sensory receptors, 4) Topographic and functional division of the nervous system, 5) Basic models of the brain-behavior relationship, 6) Hormonal management and the main neurotransmitter systems of the brain and their role in behavior, 6) Selected behavioral disorders and cognitive deficits resulting from abnormal functioning of the CNS, 7) Neuroimaging and contemporary directions of development of neurosciences.

Prerequisites and co-requisites

Knowledge of human biology at the primary school level.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
The exam (test) covers material from lectures; the exam is graded according to a percentage ("Regulations of UG Studies"),	51.0%	100.0%

Recommended reading

Basic literature	Lewandowska D., Orzeł-Gryglewska J. Fizjologia zwierząt i człowieka przewodnik do ćwiczeń, Wydawnictwo UG, 2009 Kalat J.W. Biologiczne podstawy psychologii, PWN, Warszawa, 2006,
Supplementary literature	Traczyk W.Z. Fizjologia człowieka w zarysie PZWL, 2024 Górska T., Grabowska A., Zagrodzka J. (red.) Mózg a zachowanie. Wydawnictwo Naukowe PWN, Warszawa, 1997. Narkiewicz O., Moryś J. Neuroanatomia czynnościowa i kliniczna, Wydawnictwo PZWL, 2013
eResources addresses	

Example issues/ example questions/ tasks being completed	1) Nerve cells (structure and division), 2) Causes and developmental mechanisms of the most common CNS disorders, 3) Mechanisms of peripheral and central regulation of appetitive, defensive, sexual, and parental behaviors.
Work placement	Not applicable

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