

Subject card

Subject name and code	Neurobiology of Addictions, PG_00154593						
Field of study	Medical Biology						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2026/2027		
Education level	undergraduate studies		Subject group		Obligatory subject group in the field of study Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		3.0		
Learning profile	academic		Assessment form				
Conducting unit	Pracownia Neurobiologii -> Katedra Fizjologii Zwierząt i Człowieka -> Faculty of Biology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Wojciech Glac				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	30.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
	Additional information: The course is based on gamification system (the structure are based on game mechanics, elements and plot), in which student, by systematically performing various types of tasks and obtaining points, makes progress in the game, which, in accordance with the given criteria, translates into the possibility of obtaining a given final grade (without having to participate in an exam or colloquium).						
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		5.0		40.0	75
Subject objectives	understanding the mechanisms leading to pharmacological and behavioral addiction and the basis of individual differences in susceptibility to addiction; learning the properties, mechanisms of action and effects of the most popular addictive substances; ability to recognize addiction and symptoms of taking addictive substances						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_W05] knows the structure, properties and functions of human cells, tissues and organs; human physiological and biochemical processes and mechanisms of disease pathophysiology	knows the structure and functions of the brain in terms of the neuronal mechanism of addiction (BM_W05)	[SW4] test/exam - oral or written [SW3] text preparation/written work
	[BIOLMEDL3_W06] describes, explains and compares systemic control mechanisms in animal and human organisms (including onto- and phylogenetic points of view) and the neurobiological and genetic basis of different disorders	* understands the physiological processes occurring in response to the intake (administration) of various types of addictive substances and their relationship with the addiction process and understands the neural mechanism of addiction (BM_W05, BM_W06)	[SW3] text preparation/written work
	[BIOLMEDL3_K04] is able to form opinions about individuals and social groups in a professional context	* is able to formulate opinions about individual people and social groups in the context of susceptibility to addiction and the effects of addiction, and also assess the psychophysical condition of an addicted person in various phases of addiction while maintaining ethical principles (B_K03)	[SK1] oral statement/conversation/discussion [SK5] implementation of a problem task
	[BIOLMEDL3_U07] is able to identify problems corresponding to the needs of an individual and a social group and to undertake basic diagnostic, preventive and educational activities appropriate to the profession of medical biologist	can prepare a well-documented issue on the neurobiological basis of addiction and addiction prevention (BM_U07)	[SU3] text preparation/written work [SU5] implementation of a problem task
	[BIOLMEDL3_U05] synthesises data from different sources and draws appropriate conclusions from them	synthesizes data from various sources in order to determine the degree of harmfulness, addictive potential of substances and the individual's susceptibility to developing addiction (B_U05)	[SU3] text preparation/written work [SU5] implementation of a problem task
Subject contents	- the definitions of addiction; - psychological and physical addictions; - behavioral and pharmacological addictions; - neurobiological mechanism of addiction; - theories on the development of addiction; - mechanisms of action and effects of the main pharmacological groups of addictive drugs - stimulants, depressants and psychedelics - including: amphetamine, cocaine, caffeine, nicotine, alcohol, barbiturates, benzodiazepines, opioids, LSD, psilocybin, MDMA, ketamine, phencyclidine, cannabinoids and others; - individual differences in susceptibility to addiction and the effects of taking addictive substances; - treatment of addiction		
Prerequisites and co-requisites	basic knowledge about the structure and functioning of the central nervous system		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	problem tasks	51.0%	40.0%
	discussion	51.0%	10.0%
	case study	51.0%	20.0%
	quizzes	51.0%	30.0%
Recommended reading	Basic literature	- Bijak i Lasoń (red.), Neuropsychofarmakologia: dziś i jutro, Instytut Farmakologii Klinicznej PAN, Wydawnictwo Pano-tyń, Kraków, 2000 - Szukalski, Narkotyki kompendium wiedzy o środkach uzależniających, Instytut Psychiatrii i Neurologii, Warszawa, 2005 - Longstaff, Neurobiologia, PWN, Warszawa, 2002	
	Supplementary literature	articles in specialist scientific journals (provided by teacher)	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	- test - indicate substances that are physically addictive (indicate all correct answers) - problem work - create a synthetic theory of addiction based on various theories - case study - based on the described story, indicate and justify what substances the described has taken, and why fatal overdose occurred - discussion - topic: therapeutic potential of psychedelics		
Work placement	Not applicable		