University of Gdańsk

Subject card

Subject name and code	Biological basis of addiction - lecture, PG_00132607						
Field of study	Criminology						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2026/2027			
Education level	Master's studies		Subject group	Optional subject group			
Mode of study	part-time studies		Mode of delivery	at the university			
Year of study	1		Language of instruction	Polish			
Semester of study	2		ECTS credits	1.0			
Learning profile	academic		Assessment form	credit			
Conducting unit	Laboratory of Neurobiology -> Department of Animal and Human Physiology -> Faculty of Biology -> Rector						
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	10.0	0.0	0.0	0.0	0.0	10
	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	10		0.0	15.0	25	
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, and the effects of addiction and psychoactive drugs on antisocial behavior.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[KRYMMU2_W06] Has an in-depth knowledge and is familiar with the terminology of psychology, sociology and related sciences applied in criminology, and understands the fundamental dilemmas of contemporary civilization related to them.	Has in-depth knowledge of addictions and the effects of various psychoactive substances, useful in criminology, and understands the societal challenges related to addiction and the use of these substances.	[SW4] test/exam - oral or written [SW3] text preparation/written work
[KRYMMU2_W01] Has an in-depth knowledge of the nature of legal and penal sciences, their place within the system of sciences, their interrelationships, and main development trends.	Has in-depth knowledge of the biological basis of addiction and understands the relevance of this knowledge to criminology, penal sciences and legal sciences, particularly in explaining behaviours related to the use of psychoactive substances, crime prevention, and directions in the development of interdisciplinary research on addiction.	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
[KRYMMU2_W02] Has an in-depth knowledge of the nature of natural sciences related to the studied major, their place in the system of sciences and their mutual relations	Demonstrates advanced knowledge of addiction and its biological basis, as well as the effects of psychoactive substances on the human body, as part of a broader understanding of human nature and the biological foundations of behavior, including antisocial behavior.	[SW4] test/exam - oral or written [SW5] implementation of a problem task
[KRYMMU2_K01] Is aware of the level of their knowledge and skills, critically evaluates them, and understands the need for lifelong learning.	Can, based on feedback, assess the state of their knowledge of the biological basis of addiction and identify directions for their own development.	[SK1] oral statement/conversation/ discussion [SK5] 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, cannabinols and others;
- individual differences in susceptibility to addiction and the effects of taking addictive substances;
- effects of addiction and psychoactive drugs on antisocial behavior;
- treatment of addiction

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
discussions	51.0%	20.0%
problem-based tasks / case studies	51.0%	50.0%
quizzes	51.0%	30.0%

Recommended reading

Basic literature	• Bijak i Lasoń (red.), Neuropsychofarmakologia: dziś i jutro, Instytut Farmakologii Klinicznej PAN, Wydawnictwo Palotyn, Kraków, 2000 • Szukalski, Narkotyki kompendium wiedzy o środkach uzależniających, Instytut Psychiatrii i Neurologii, Warszawa, 2005
Supplementary literature	• Longstaff, Neurobiologia, PWN, Warszawa, 2002 • articles in specialist scientific journals (provided by teacher)
eResources addresses	

Example issues/ example questions/ tasks being completed

- test - indicate substances that are physically addictive (indicate all correct answers)
- problem-based task - 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 criminal behavior occurred
- discussion - topic: therapeutic potential of psychedelics

Work placement

Not applicable

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