

Subject card

Subject name and code	Psychoactive Substances, PG_00188347						
Field of study	Substancje psychoaktywne (Ćw.laboratoryjne)						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2028/2029		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study 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	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		2.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Analytical Chemistry -> Faculty of Chemistry -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Paweł Niedziałkowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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		5.0		15.0	50
Subject objectives	The aim of the course is to familiarize students with safe methods of identification and analysis of selected substances. The classes are designed to develop the ability to apply basic laboratory techniques used in the analysis of psychoactive substances, taking into account safety procedures and rules for working with chemicals.Students will learn how to correctly select analytical methods, interpret test results, and understand the limitations of the tools used.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[AKRL3_K02] The graduate is ready to make reliable, objective decisions and take responsibility for the interpretation of research results.	Defines the basic principles of chemical compound analysis. Performs measurements and is able to analyze the obtained data. Understands the programs that operate chemical equipment	[SK2] prezentacja/projekt/referat/raport [SK4] test/egzamin - ustny lub pisemny
	[AKRL3_K04] The graduate is ready to cooperate with representatives of other fields—law, medicine, biology—within forensic expertise.	Defines the basic principles of psychoactive substances. Defines techniques for their analysis. Defines the risks and legal aspects of possessing psychoactive substances, as well as their social consequences.	[SK2] prezentacja/projekt/referat/raport [SK4] test/egzamin - ustny lub pisemny
	[AKRL3_U11] The graduate is able to work effectively in a laboratory team while adhering to professional ethics and organisational rules.	Acquires knowledge in the field of analytical equipment operation. Acquaints themselves with the chemical apparatus used in the analysis of psychotropic substances.	[SU2] prezentacja/projekt/referat/raport [SU4] test/egzamin - ustny lub pisemny
	[AKRL3_U03] The graduate is able to perform analyses using instrumental methods (spectroscopy, chromatography, microbiological tests) and interpret research results.	Explains the principle of action of chemical apparatus used in instrumental analysis. Is able to propose analyses in the field of psychoactive substance detection.	[SU2] prezentacja/projekt/referat/raport [SU4] test/egzamin - ustny lub pisemny
	[AKRL3_W05] The graduate knows and understands toxicokinetic and toxicodynamic processes and the methods of identifying toxic substances in forensic contexts.	Able to list basic psychoactive substances. Explains the principle of operation of equipment used in the analysis of toxic substances.	[SW4] test/egzamin - ustny lub pisemny [SW2] prezentacja/projekt/referat/raport
	[AKRL3_U09] The graduate is able to independently plan and implement their professional development and lifelong learning.	Acquires knowledge in the field of analysis of compounds and substances with potential psychotropic effects. Is aware of the need to further develop knowledge in the field of research and analysis of chemical substances.	[SU2] prezentacja/projekt/referat/raport [SU4] test/egzamin - ustny lub pisemny
	[AKRL3_U02] The graduate can plan and organize individual and team work and collaborate with others in team projects (including interdisciplinary teams).	Gains the knowledge of working in a chemical laboratory and the health and safety rules in a chemical laboratory. Is able to cooperate in a forensic laboratory.	[SU2] prezentacja/projekt/referat/raport [SU4] test/egzamin - ustny lub pisemny
	[AKRL3_W03] The graduate knows and understands the structure and chemical properties of compounds relevant in forensic examinations.	Capable of conducting and interpreting the results of analyses of selected chemical compounds recognized as psychoactive substances.	[SW4] test/egzamin - ustny lub pisemny [SW2] prezentacja/projekt/referat/raport
	[AKRL3_K06] The graduate is ready to follow occupational health and safety regulations in the laboratory and care for the safety of themselves and others.	Recognizes the risks associated with the use of psychoactive substances. Exercises caution when handling chemical substances with psychoactive properties.	[SK2] prezentacja/projekt/referat/raport [SK4] test/egzamin - ustny lub pisemny
Subject contents	Health and safety rules applicable in the laboratory; basics of psychoactive substance identification. Methods of sample preparation for analysis. Qualitative methods for detecting organic compounds. Introduction to instrumental techniques (chromatography, spectroscopy, microscopy). Interpretation of test results, working with control samples, documentation, and reporting of results.		
Prerequisites and co-requisites	Prerequisites: application of safety rules in a chemical laboratory. Use of laboratory glassware, knowledge of chemical reactions and their effects. Knowledge of basic analyses used in a laboratory. Successfully completed a course in biochemistry and nomenclature of organic compounds.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	laboratory reports	51.0%	100.0%
Recommended reading	Basic literature	1. T. Białas, M. Jędrzejko, Narkotyki i nowe substancje psychoaktywne. Zjawisko, zagrożenia, profilaktyka, PWN 2019 2. M. Jarema, Uzależnienia i substancje psychoaktywne w praktyce lekarza POZ, PZWL, 2018 3. H. Kuntz Narkotyki i uzależnienia, Parpamedia, 2009 4. J. Sein Anand, M. Wiergowski Alkohol i człowiek - toksyczny związek, PZWL 2023	
	Supplementary literature	1. Noah Whiteman, Przypyszne trucizny. Od przypraw do narkotyków, Feeria, 2023	
	eResources addresses		

Example issues/ example questions/ tasks being completed	1. Describe the methods that can be used to test ethyl alcohol.
Work placement	Not applicable

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