

Subject card

Subject name and code	What is pharmacology?, PG_00179605						
Field of study	Chemistry						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	Master's studies		Subject group		Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		English		
Semester of study	4		ECTS credits		4.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Faculty of Chemistry -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Elżbieta Kamysz				
	Teachers						
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						
	Additional information:						
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		12.0		58.0	100
Subject objectives	To acquire basics terms in the field of pharmacology.						
	To learn the mechanisms of action of medicines and the fate of the medicine in the human body.						
	To learn the characteristics of medicines used in the treatment of selected civilization and infectious diseases.						
	To distinguish formulations of drugs and their correct use.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[CHEMMU2_U06] Presents the results of scientific discoveries in chemistry and related disciplines in an understandable way.	The student prepares a presentation on drugs and related issues.	[SU2] presentation/project/paper/report
	[CHEMMU2_K06] Undertakes research tasks consciously and responsibly, understanding the social aspects of the practical application of the acquired knowledge and skills and the responsibility related to it.	The student participates in the formulation of the topic of the presentation.	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report
	[CHEMMU2_U08] Prepares and presents oral presentations in various fields of chemistry in Polish and English, using acquired knowledge and skills as well as basic sources of scientific information.	The student prepares a presentation in English on drugs and related issues, addressing both chemical and pharmacological aspects.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report
	[CHEMMU2_K01] Knows the limitations of her/his own knowledge; understands the need for further education and can inspire other people to do so.	The student is aware of the therapeutic effects as well as the adverse effects of drugs; understands the need for continuing education and development and the search for new drugs.	[SK2] presentation/project/paper/report [SK4] test/exam - oral or written
	[CHEMMU2_U03] Finds necessary information in specialist literature, databases and other sources, lists basic scientific journals in chemistry.	The student is able to use a variety of sources of drug knowledge.	[SU2] presentation/project/paper/report
	[CHEMMU2_U04] Applies acquired knowledge of chemistry and related scientific disciplines.	The student, based on the acquired knowledge, can predict what the fate of the drug will be in the body.	[SU4] test/exam - oral or written
	[CHEMMU2_K05] Understands the need for independent search of information in scientific literature and popular science magazines.	The student understands the need to expand knowledge of drugs already approved for sale. The student is able to use sources of information about drugs.	[SK2] presentation/project/paper/report [SK4] test/exam - oral or written
Subject contents	[CHEMMU2_W05] Has extended knowledge in the field of the specialisation studied.		
	• Definitions and basic terms in the field of pharmacology. • Drug sources and targets; modes of drug action. • Pharmacokinetics studies the passage of drugs through the organism (liberation, absorption, distribution, metabolism, excretion) and the most common pharmacokinetic parameters such as clearance, volume of distribution, and bioavailability. • Basic formulations of drugs. • Major steps in the drug discovery process (from idea to market). • Therapeutic equivalence. • Prevention of drug falsification. • Sources of drug information. • Pharmacotherapy of selected diseases of civilization, for example: diabetes, hypertension, cancer, inflammatory bowel diseases. • Medicines used to fight infections (e.g., antibacterial, antifungal, antiviral medicines). • Side effects of medicines. • Interaction of medicines with alcohol and food products. • Mechanisms of action of poisons on the body; outline of procedures in case of poisoning; • Pharmacology in travel medicine.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test (open and closed questions) covering the lecture material;	51.0%	70.0%
	presentation	51.0%	30.0%

Recommended reading	Basic literature	Rang & Dale's Pharmacology, 10th Edition Authors : James M. Ritter & Rod J. Flower & Graeme Henderson & Yoon Kong Loke & David MacEwan & Emma Robinson & James Fullerton Date of Publication: 05/2023
	Supplementary literature	W.Kostowski, Z.S. Herman „Farmakologia", PZWL 2014; J.M. Ritter, R. Flower, G. Henderson, Y. Kong Loke, D. MacEwan, HP. Rang, „Rang i Dale Farmakologia", Elsevier, 2020; R. Olszanecki, P. Wołkow, J. Jawień, „Farmakologia", PZWL,2023;
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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