

Subject card

Subject name and code	Fundamentals of pharmacology, PG_00154764						
Field of study	Biology						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
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		Polish		
Semester of study	4		ECTS credits		2.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
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						
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		3.0		17.0	50
Subject objectives	C1. Acquisition of definitions and basic terms in the field of pharmacology. C2. Distinguishing the forms of medicines and their correct use. C3. Distinguishing the basic groups of medicines used in: diabetes, cancer therapy and diseases of the circulatory, respiratory and digestive system . Knowledge side effects of medicines and their interactions with other medicines and food products. C4. Understanding the mechanisms of action of drugs and the fate of drugs in the human body.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMU2_W02] the graduate knows and applies the principle of strict, empirically based interpretation of biological phenomena and processes in research work and practical activities	Student: explains the basic terms and issues in the field of general pharmacology; knows the main mechanisms of action of medicines; has knowledge about the study of new medicines; is able to characterize selected groups of medicines; knows the procedure of reporting side effects; has a basic knowledge of the possible interactions between medicines and between medicines and nutrients.	[SW4] test/exam - oral or written
	[BIOLMU2_U03] the graduate can critically analyse and select biological information, especially from electronic sources	Student: is aware of the therapeutic and adverse effects of medicines.	[SU4] test/exam - oral or written
	[BIOLMU2_W03] the graduate has an in-depth knowledge and understanding of research problems at the frontiers of biological sciences that require the use of advanced tools	Student: is able to use sources of information about medicines; uses basic pharmacological knowledge regarding the choice of the form and route of administration of medicines, therapeutic effect and side effects.	[SW4] test/exam - oral or written
Subject contents	• Forms and routes of drug administration. • Research of new drugs. • General rules for the use of drugs, dosage, pharmacotherapy of children and the elderly. • Adverse effects, drug interactions. • Pharmacodynamics and mechanisms of drug action. • Pharmacokinetics. • Painkillers (narcotic and non-narcotic) and anesthetics. • Medicines used in cancer therapy. • Medicines used in diabetes. • Medicines used in hypertension. • Antimicrobial medicines. • Medicines used in the digestive system diseases. • Pharmacological basis for poisoning treatment. Medicine-related complications.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		51.0%	100.0%
Recommended reading	Basic literature	• R. Olszanecki, P. Wołkow, J. Jawień, „Farmakologia", PZWL, 2023; • E. Mutschler Farmakologia i toksykologia Urban & Partner, 2010; • E. Mutschler Kompendium farmakologii i toksykologii MedPharm 2008; • 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; • M. Pawłowski, „Chemia leków", PZWL, 2020.	
	Supplementary literature	G. Rajtar-Cynke Farmakologia Czelej, Lublin, 2002	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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