

Subject card

Subject name and code	Bioinorganic chemistry, PG_00049918						
Field of study	Chemistry						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Optional subject group 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	2		Language of instruction		Polish		
Semester of study	3		ECTS credits		1.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Department of Bioinorganic Chemistry -> Faculty of Chemistry -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Mariusz Makowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	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	15		2.0		8.0	25
Subject objectives	to make students familiar with problems occurring at the border of chemical, biological and medical sciences introduction of basic and specialized information from biochemistry (in particular information about the role played in living organisms by bioelements, ions of selected metals, metal compounds)						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[CHEMMU2_U07] Defines and implements the directions of own further education.		Student solves tasks and deepens learning skills		[SU4] test/exam - oral or written [SU8] observation of student's independent or team work		
	[CHEMMU2_K01] Knows the limitations of her/his own knowledge; understands the need for further education and can inspire other people to do so.		Observation of the student in terms of the ability to search for scientific studies of the issues discussed in the classes		[SK4] test/exam - oral or written [SK8] observation of student's independent or team work		
	[CHEMMU2_W01] Uses knowledge of spectroscopic methods of chemical compound analysis.		student solves problems with basic and more advanced concepts in the field of bioinorganic chemistry		[SW4] test/exam - oral or written [SW5] implementation of a problem task		
Subject contents	the lecture will discuss contents consistent with the latest scientific trends concerning bioinorganic chemistry						
Prerequisites and co-requisites	basic knowledge of inorganic and coordination chemistry						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	written exam with open-ended questions (assignments) 8-20 questions, each graded 1 point	50.0%	100.0%
Recommended reading	Basic literature	L. Stephen, B. Jeremy Podstawy chemii bionieorganicznej R. M. Roat-Malone Bioinorganic Chemistry: A Short Course E. Ochiai Bioinorganic Chemistry: a survey	
	Supplementary literature	Bioinorganic Chemistry and Applications scientific journal	
	eResources addresses		
Example issues/ example questions/ tasks being completed	What is a sodium-potassium pump? Indicate the number of ions exchanged during normal operation of the pump.		
Work placement	Not applicable		

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