

Subject card

Subject name and code	Bioinorganic chemistry, PG_00171090						
Field of study	Chemical Business, Chemistry, Environmental Protection						
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				Polish	
Semester of study	3	ECTS credits				2.0	
Learning profile	academic	Assessment form				credit	
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	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
	Additional information: Lecture with multimedia presentation						
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	10.0	20.0	60		
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_W05] Has extended knowledge in the field of the specialisation studied.	A student uses the terminology and chemical symbolism associated with the role of bio-inorganic chemistry			[SW4] test/exam - oral or written		
	[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		
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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