University of Gdańsk

Subject card

Subject name and code	Bioinorganic chemistry, PG_00049918		
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	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_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
[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_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

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

<table>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>written exam with open-ended questions (assignments) 8-20 questions, each graded 1 point</td><td>50.0%</td><td>100.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">L. Stephen, B. Jeremy Podstawy chemii bionieorganicznej
R. M. Roat-Malone Bioinorganic Chemistry: A Short Course
E. Ochiai Bioinorganic Chemistry: a survey</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Bioinorganic Chemistry and Applications scientific journal</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">What is a sodium-potassium pump? Indicate the number of ions exchanged during normal operation of the pump.</td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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