

Subject card

Subject name and code	General chemistry, PG_00148305						
Field of study	Chemia ogólna - ćwiczenia audytoryjne (Ćw. audytoryjne)						
Date of commencement of studies	October 2025		Academic year of realisation of subject			2025/2026	
Education level	Bachelor's studies		Subject group			Obligatory subject group in the field of study	
Mode of study	full-time studies		Mode of delivery			at the university	
Year of study	1		Language of instruction			Polish	
Semester of study	1		ECTS credits			1.0	
Learning profile	academic		Assessment form			credit	
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Jolanta Kumirska				
	Teachers		dr Bożena Karawajczyk				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	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	Auditorium exercises: Developing the ability to apply acquired knowledge to solve specific problems i tasks.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_W18] knows the basic principles of occupational health and safety and ergonomics	Student lists the principles of safe handling of hazardous substances. Student lists the most important elements of laboratory equipment and describes their applications for specific activities.	[SW3] opracowanie tekstowe/ praca pisemna
	[BIOLMEDL3_U01] uses basic apparatus and research tools and, maintaining the correct sequence of operations, performs simple physical, biological or chemical observations and measurements in laboratory work in the biological or medical sciences	Student plans, performs and carries out research experiments, organizes and analyzes the experimental results, draws correct conclusions based on them, presents the experimental results in writing. Student draws and uses laboratory equipment in accordance with its intended purpose. Student conducts calculations using the known chemical laws.	[SU1] wypowiedź ustna/rozmowa/ dyskusja [SU3] opracowanie tekstowe/ praca pisemna
	[BIOLMEDL3_W15] describes the principles of evaluating processes and phenomena occurring in a living organism, using physical or chemical measurements	Student describes the basic methods of testing the properties of chemical substances.	[SW3] opracowanie tekstowe/ praca pisemna
	[BIOLMEDL3_W09] identifies the tools of mathematics necessary to understand the laws of nature and to describe the processes of life	Student defines the most important chemical laws and concepts governing phenomena occurring in nature. It indicates the relationship between the structure of the atom and the properties of the element and its position in the periodic table. Student lists the most important types of chemical bonds. Student describes the structure of gases, liquids and solids in terms of the kinetic-molecular model of matter. Student defines molar and percentage concentration. Student describes the most important aspects of energy, kinetics and reaction equilibrium. Student describes the acid-base properties of aqueous solutions using the concept of pH. Student explains the basic concepts of oxidation-reduction reactions and electrochemical phenomena.	[SW3] opracowanie tekstowe/ praca pisemna
	[BIOLMEDL3_U15] learns independently, in a focused manner	Student solves tasks and problems in the field of applying the laws of chemistry in biological and medical sciences, independently using various sources of information.	[SU1] wypowiedź ustna/rozmowa/ dyskusja [SU3] opracowanie tekstowe/ praca pisemna
Subject contents	Auditorium exercises: Atomic, molecular and molar mass. The relationship of the structure of the atom with its position in the periodic table and the properties of the element. Chemical equation of the reaction, balancing, stoichiometric calculations. Molar and percentage concentration, density of solutions. Calculations related to ionic equilibria in solution: dissociation, hydrolysis, pH.		
Prerequisites and co-requisites	lack		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	more than 50% in both written tests, positive assessment of the student's work in classes and homework	51.0%	100.0%
Recommended reading	Basic literature	1. Jones L., Atkins P. 2020. Chemia ogólna. PWN, Warsaw 2. Lee J. D. 1994. Związła chemia nieorganiczna. PWN, Warsaw 3. Pauling L., Pauling P. 1997. Chemia. PWN, Warsaw	
	Supplementary literature	1. Bielański A. 2012. Podstawy chemii nieorganicznej. Tom 1, 2. PWN, Warsaw	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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