University of Gdańsk

Subject card

Subject name and code	General chemistry, PG_00203320						
Field of study	Medical Biology						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2026/2027			
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	3.0			
Learning profile	academic		Assessment form	credit			
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Jolanta Kumirska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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		6.0		39.0	75
Subject objectives	Laboratory exercises: Experimental knowledge of selected properties of matter and the operation of the laws of chemistry. Developing the ability to plan, implement and draw conclusions from a scientific experiment. Acquiring the ability to use basic laboratory techniques and safe work with hazardous substances.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BIOLMEDL3_U10] learns independently and in a focused manner, and is able to set priorities and organise the work of a small team, as well as work effectively within a team	The student is able to plan and organize their own work and that of a small team when solving problems and carrying out tasks in the field of general chemistry, set priorities, and work effectively with team members.	[SU1] oral statement/conversation/ discussion [SU8] observation of student's independent or team work
[BIOLMEDL3_W10] has an advanced understanding of the principles of assessing processes and phenomena occurring within the body, using physical or chemical measurements, and possesses advanced knowledge of experimental methods and the key techniques of the biological sciences that may be applied in medical biology and diagnostics	The student knows and understands the principles of performing and interpreting physical and chemical measurements used to assess the properties and processes occurring in biological systems and knows the experimental methods used in chemical and biological analysis.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
[BIOLMEDL3_W06] idefines the key laws and principles of physics and chemistry that underpin biological processes, describes the properties of elements and chemical compounds, and has an advanced knowledge and understanding of the physicochemical and biological foundations of health sciences	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.	[SW2] presentation/project/paper/ report [SW3] text preparation/written work
[BIOLMEDL3_U01] is able to use and operate basic research equipment and tools employed in molecular-biochemical analysis or neurobiology and, following the correct sequence of steps, carries out simple physical, biological or chemical observations and measurements in laboratory work in the field of 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.	[SU2] presentation/project/paper/ report [SU3] text preparation/written work [SU8] observation of student's independent or team work
[BIOLMEDL3_K06] Is responsible for the equipment/materials entrusted to him and his own work and respects the work of others	Student demonstrates responsibility for the entrusted equipment and reagents, ensures cleanliness and order at the workplace. Student takes tests and colloquiums and submits reports within the prescribed deadlines.	[SK1] oral statement/conversation/ discussion [SK8] observation of student's independent or team work
[BIOLMEDL3_K04] jest odpowiedzialny za bezpieczeństwo pracy własnej i innych oraz potrafi rozpoznać sytuacje zagrożenia i podjąć odpowiednie działania	Student follows the rules of safe conduct in a chemical laboratory in such a way as not to pose a threat to one's own health, the health of others and the environment.Student uses the information contained in the Material Safety Data Sheets.	[SK1] oral statement/conversation/ discussion [SK8] observation of student's independent or team work
[BIOLMEDL3_K01] is aware of the importance of lifelong learning and keeping up to date with developments in medical biology and related disciplines, and applies this knowledge to the planning and design of professional activities	Student understands the importance of chemical sciences for the development of biological and chemical sciences, understands the need to improve their knowledge and skills in this area.	[SK1] oral statement/conversation/ discussion [SK8] observation of student's independent or team work

	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_W12] is familiar with the principles of occupational safety, health, and ergonomics, as well as the legal, organizational, and ethical considerations involved in the professional practice of a neurobiologist or molecular-biochemical analyst	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.	[SW2] presentation/project/paper/ report [SW3] text preparation/written work
Subject contents	Laboratory exercises: Laboratory tasks related to the topic of the lecture.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	positive grades in all entrance written tests	51.0%	80.0%
	completing all exercises provided for in the study program	100.0%	0.0%
	developing and presenting the results in writing and obtaining partial passes for all experimental tasks	51.0%	20.0%
Recommended reading	Basic literature	1. Jones L., Atkins P. 2020. Chemia ogólna. PWN, Warsow. 2. Lee J. D. 1994. Zwięzła chemia nieorganiczna. PWN, Warsow. 3. Pauling L., Pauling P. 1997. Chemia. PWN, Warsow.	
	Supplementary literature	1. Bielański A. 2012. Podstawy chemii nieorganicznej. Tom 1, 2. PWN, Warsow	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

Document generated electronically. Does not require a seal or signature.