

Subject card

Subject name and code	Community and chemistry, PG_00081544						
Field of study	Chemical Business, Chemistry						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2028/2029		
Education level	Bachelor's studies		Subject group		Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		2.0		
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	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		5.0		15.0	50
Subject objectives	Presentation for students the most important connections between the knowledge acquired during studies and phenomena and problems that they know from their direct experience and general knowledge of the modern world.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[CHEML3_K01] Identifies the level of her/his own knowledge and skills and the need for continuous learning and personal development.	Student is convinced of the importance of understanding the connections between the knowledge acquired during studies and the phenomena and problems that they know from their direct experience and general knowledge of the modern world. Student identifies the need to use the connections between chemistry and everyday phenomena in teaching practice.	[SK4] test/exam - oral or written [SK8] observation of student's independent or team work
	[CHEML3_W03] Explains the relationship between the structure of matter and its observed properties.	Student presents the basic problems of agriculture, the chemical industry, energy and materials used in construction related to the processes and chemical substances used there, also in economic terms, and describes the impact of these activities on the environment.	[SW4] test/exam - oral or written
	[CHEML3_U08] Presents in an understandable way the basic facts about chemistry using a scientific language typical of chemical sciences.	Student justifies in terms of structure-properties the use of individual chemical substances in food, stimulants, cleaning products and cosmetics. Student uses terminology specific to chemistry and environmental protection, student assesses the effects of the development of energy, industry and agriculture on the development of civilization and the state of the environment.	[SU4] test/exam - oral or written [SU8] observation of student's independent or team work
	[CHEML3_W02] Describes the properties of elements and the most important chemical compounds, enumerates the methods of their preparation and methods of analysis.	Student knows the most important ingredients of food and stimulants, describes their functions, chemical and biochemical transformations. Student lists the most important chemical substances used in cleaning products and cosmetics, describes their functions and transformations.	[SW4] test/exam - oral or written
Subject contents	Nutritional chemistry. Energy value and importance of nutrients, composition of the most important foods, transformations occurring during food preparation. Chemistry of stimulants. Chemistry of cleanliness and hygiene. Chemistry in agriculture. Soil, fertilizers, pesticides. The effects of intensive agricultural production on society and the environment. Chemical industry. Economics of industrial processes, efficiency/reaction speed compromise. Basic raw materials and products of the chemical industry. Energy sources. Fossil fuels and the effects of their exploitation on social life and environment. Construction chemistry.		
Prerequisites and co-requisites	lack Convergent to: general chemistry, inorganic chemistry, organic chemistry, physical chemistry		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	sum of points from the written test covering the scope of material covered during lectures, including an assessment of the student's activity during the lecture (max. 10%)	51.0%	100.0%
Recommended reading	Basic literature	1. M. M. Jones, D. O. Johnston, J. T. Neterville, J. M. Wood, M. D. Joesten "Chemistry and Society", Saunders College Publishing, Philadelphia 1987. 2. K. Waldron "The Chemistry of Everything", Pearson/Prentice Hall, Upper Saddle River 2007. 3. Materials prepared by the author	
	Supplementary literature	Current scientific reports regarding the lecture program content.	
	eResources addresses		

Example issues/ example questions/ tasks being completed	
Work placement	Not applicable

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