

Subject card

Subject name and code	Chemistry and Society, PG_00172709						
Field of study	Business and Environmental Technology						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Master's studies		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	4		ECTS credits		2.0		
Learning profile	academic		Assessment form				
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Marek Kwiatkowski				
	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		13.0		22.0	50
Subject objectives	Showing students the relationship between natural sciences, in particular chemistry, 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
	[BiTEMU2_U02] uses in practice various forms and scope of acquired economic knowledge, complementing it with a critical analysis of effectiveness and usefulness	uses knowledge about the effects of chemical substances on human life and is able to demonstrate beneficial and unfavorable effects	[SU1] oral statement/conversation/discussion
	[BiTEMU2_W01] describes the relationship between economics and ecological technology, their place in the system of social and exact sciences	knows what relationships exist between economic efficiency and the use of technology in the chemical industry	[SW4] test/exam - oral or written
	[BiTEMU2_K05] is characterized by personal values related to being guided in professional life by business ethics and corporate social responsibility, respect for others, and loyalty to the company	is characterized by critical sensitivity to issues of negative impacts and the ability to propose solutions to limit the negative effects of impacts	[SK1] oral statement/conversation/discussion
	[BiTEMU2_W03] has in-depth knowledge of economic processes, phenomena, entities, structures and institutions as well as the detailed principles of their functioning	has in-depth knowledge of the institutions responsible for assessing and monitoring the impact of chemicals on social life	[SW4] test/exam - oral or written
	[BiTEMU2_W09] predicts the effects of human interference in the natural environment and analyzes the impact of human activity on the quality of the environment on a local, regional and global scale	predicts the effects of negative impacts of chemical substances	[SW4] test/exam - oral or written
	[BiTEMU2_K01] understands the need for lifelong learning, verifies the state of his or her economic knowledge, is able to inspire and organize the learning process of other people	seeks knowledge about the interactions between chemistry and society at present and in the long term and in historical and future perspectives	[SK1] oral statement/conversation/discussion
	[BiTEMU2_W06] has in-depth knowledge of views on selected types of economic entities, structures and institutions as well as selected categories of economic ties and their historical evolution	has in-depth knowledge about the impact of chemical substances on various aspects of human life: health, nutrition, well-being, production, etc.	[SW4] test/exam - oral or written
	[BiTEMU2_W05] knows various types of economic and social bonds and relations created by economic sciences and about the regularities that govern them	has knowledge of cause and effect relationships between the production and use of chemical substances and various aspects of human life	[SW4] test/exam - oral or written
	[BiTEMU2_U01] is able, based on economic sciences, to correctly observe, interpret, and explain economic phenomena and processes and the mutual relations between them, using specialized economic terminology	can notice, interpret and explain the impact of chemical substances or the production of these substances on various aspects of human life	[SU1] oral statement/conversation/discussion
Subject contents	Contemporary construction materials, their properties, protection against degradation, recycling. Energy sources, fossil fuels and the effects of their exploitation on social life and the environment. Chemistry in industry, agriculture and nutrition. Chemistry of stimulants. Chemistry of cleanliness and hygiene.		
Prerequisites and co-requisites	None		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Test 80%, Discussion activity 20%	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 2. K. Waldron "The Chemistry of Everything", Pearson/Prentice Hall, Upper Saddle River 2007.	
	Supplementary literature	1. Materials prepared by the author	
	eResources addresses	Adresy na platformie eNauczanie:	

Example issues/ example questions/ tasks being completed	Problems related to the properties of construction materials Impacts of fuels and energy sources Fossil fuels and the effects of their exploitation Chemistry in industry, agriculture and nutrition Chemistry of stimulants. Chemistry of cleanliness and hygiene
Work placement	Not applicable

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