University of Gdańsk

Subject card

Subject name and code	Chemistry and Society, PG_00199748						
Field of study	Business and Environmental Technology						
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		
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		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	15.0	0.0	0.0	15.0	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		0.0		20.0	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_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
[BiTEMU2_K05] Is aware of the importance of business ethics and corporate social responsibility in professional life and demonstrates a willingness to act with respect for others and the principles of professional loyalty and loyalty to the company, understood as reliable and responsible performance of duties.	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_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_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_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] provides an in-depth analysis of the relationship between economics and environmental technology, and their place within the social and natural sciences.	knows what relationships exist between economic efficiency and the use of technology in the chemical industry	[SW4] test/exam - oral or written
[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_K01] understands the need for lifelong learning, verifies the state of his/her economic knowledge, understands the need to inspire and organize the learning process of others; has the ability to use a foreign language to a degree enabling communication, including for professional purposes (level B2+ or higher)	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

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	
Example issues/ example questions/ tasks being completed	Problems related to the properties of construction materialsImpacts of fuels and energy sourcesFossil fuels and the effects of their exploitationChemistry in industry, agriculture and nutritionChemistry of stimulants. Chemistry of cleanliness and hygiene	
Work placement	Not applicable	

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