University of Gdańsk

Subject card

Subject name and code	Diploma lecture - Community and chemistry, PG_00081846		
Field of study	Chemistry		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
Education level	Bachelor'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	3	Language of instruction	Polish
Semester of study	6	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit	Faculty of Chemistry -> Rector		
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_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, it 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_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_W02] Describes the properties of elements and the most important chemical compounds, enumerates the methods of their preparation and methods of analysis.	Student lists the most important ingredients of food and stimulants and describes them functions, chemical and biochemical transformations. Student lists the most important chemical substances used in products cleaning 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 the 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 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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