GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	ENVIRONMENTAL CHEMISTRY, PG_00059996		
Field of study	Environmental Engineering		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2024/2025
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	English
Semester of study	1	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Environmental Engineering Technology -> Faculty of Civil and Environmental Engineering		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Aneta Łuczkiewicz	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	15.0	0.0	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	5.0	20.0	55

Subject objectives

The aim of the course is to analyze the chemical processes that occur in water, air, terrestrial and living environments, and the effects of human activity on them. It includes topics such as: atmospheric chemistry, marine and inland water chemistry, environmental monitoring and modelling, pollution tracking, removal and remediation. An interdisciplinary approach, implemented during the lectures and tutorials, is particularly encouraging the students to advanced understanding of the linkages between chemistry and physical or biological processes.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K7_W03	Student is ready to monitor, realistically determine and mitigate the environmental risks connected with chemical processes	[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation
[K7_U01] can obtain information from literature, databases and other sources; can integrate the obtained information, interpret and critically evaluate them, draw conclusions, and formulate and comprehesively justify the opinions	The ability to obtain information from literature, databases and other sources, to integrate the obtained information, interpret it and draw conclusions	[SU2] Assessment of ability to analyse information [SU5] Assessment of ability to present the results of task

Subject contents

Lectures:Examples of the use of chemicals (in everyday life, in industry, agriculture) - advantages and disadvantages. Hazardous substances in the environment (air, soil, water, food contamination). Ecological and health threats. Micro-pollutants in the environment. Examples of toxic waste disposal, especially in terms of biodegradation. Selected aspects of bioeconomy..

Tutorials: to identify and formulate specifications for simple engineering tasks of a practical nature. The ability to make a critical analysis of the functioning and evaluation of existing technical solutions.

Prerequisites and co-requisites

Basic concepts of environmental chemistry

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Tutorials	60.0%	40.0%
Lectures	60.0%	60.0%

Recommended reading	Basic literature	Gary W. van Loon, Stephen J. Duffy , Environmental Chemistry: A global perspective, Oxford University, Oxford, 2005. https://www.pdfdrive.com/an-introduction-to-environmental-chemistry-e17374243.html
	Supplementary literature	nie dotyczy
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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