



Subject card

Subject name and code	Fundamentals of Chemistry in Environmental engineering I, PG_00058739						
Field of study	Environmental Engineering						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
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 -> Wydziały Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Karolina Fitobór				
	Teachers						
Lesson types and methods of instruction	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						
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	Review of fundamental issues of the general chemistry (including inorganic chemistry, electrochemistry, chemical kinetics), introduction to the chemistry in civil engineering, environmental chemistry and acquiring the ability to perform basic chemical analyzes (qualitative and quantitative tests of water and wastewater).						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U09] is able to use well-chosen methods and measuring devices that enable determination of basic parameters of the water treatment process and wastewater treatment; can perform simple laboratory tests leading to the assessment of water quality, pollutant load in sewage		Student is able to use properly selected methods and devices and to prepare and perform basic physico-chemical laboratory tests.		[SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject		
	[K6_W03] has a structured and theoretically founded knowledge in the field of chemistry and biology, including knowledge necessary to understand the technological processes related to water treatment, wastewater treatment, waste management and sludge management		Student has properly organized knowledge (with theoretical basis) in the field of chemistry, including knowledge necessary to understand technological processes related to water and wastewater treatment, as well as waste and sludge management.		[SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge		
Subject contents	General chemistry basis (i.e. structure of matter, kinetics of reaction equations, stoichiometry, inorganic chemistry, physical chemistry) and overview of topics connected with chemistry in civil engineering and environmental chemistry (especially chemistry of water and wastewater).						
Prerequisites and co-requisites	<ul style="list-style-type: none">• ability to use basic knowledge of chemistry from earlier years of education• the ability to use the knowledge from lectures during practical classes (continuation of the subject during laboratory classes)						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	2 x test		60.0%		100.0%		

Recommended reading	Basic literature	1) Jones L., Atkins P., Leroy L.: Chemia ogólna. Wydawnictwo Naukowe PWN, Warszawa 2020 2) Bielański A.: Podstawy chemii nieorganicznej. Wydawnictwo Naukowe PWN, Warszawa 2010. 3) Czarnecki I., Broniewski T., Henning O.: Chemia w budownictwie. Wydawnictwo Arkady, Warszawa 2000.
	Supplementary literature	1) Kowal A.L., Świdorska Bróz M.: Oczyszczanie Wody. Podstawy teoretyczne i technologiczne, procesy i urządzenia. Wydawnictwo Naukowe PWN, Warszawa 2007. 2) Prejzner J.: Chemia z elementami chemii środowiska. Wydawnictwo Politechniki Gdańskiej, Gdańsk 1996
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	-	
Work placement	Not applicable	

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