



Subject card

Subject name and code	Chemistry, PG_00042610						
Field of study	Environmental Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2020/2021		
Education level	first-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	Part-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			9.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Environmental Engineering Technology -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Karolina Fitobór					
	Teachers	dr inż. Aleksandra Sokołowska inż. Krystyna Mierzejewska dr inż. Karolina Fitobór					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	16.0	16.0	0.0	0.0	62
	E-learning hours included: 0.0						
	Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=4342 Adresy na platformie eNauczanie: Chemia dla kierunku Inżynieria Środowiska (niestacjonarne) - semestr letni 2020/2021 - Moodle ID: 8445 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=8445						
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	62	12.0		152.0		226
Subject objectives	Revision of the general chemistry and introduction to the chemistry of construction materials and environmental chemistry; knowledge and ability to perform chemical analyses (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 is able to perform simple laboratory tests.			[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		
	[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 in-depth and well-structured chemistry and biology knowledge, including the knowledge necessary to understand technological processes related to water and wastewater treatment, as well as waste and sludge management.			[SW1] Assessment of factual knowledge		
Subject contents	Basic information of general chemistry (i.a.: constitution of matter, kinetics of chemical equations, stoichiometry, inorganic chemistry, physical chemistry), as well as the most important issues of chemistry of construction materials and environmental chemistry (with particular emphasis on water and wastewater chemistry).						

Prerequisites and co-requisites	Ability to use the knowledge from lectures during laboratory classes.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Laboratory classes - course completion (tests, reports)	60.0%	40.0%
	Lectures - tests	60.0%	60.0%
Recommended reading	Basic literature	<p>Lectures:</p> <p>Prejzner J.: <i>Chemia z elementami chemii środowiska</i>. Wydawnictwo Politechniki Gdańskiej, Gdańsk 1996. Czarnecki I., Broniewski T., Henning O.: <i>Chemia w budownictwie</i>. Wydawnictwo Arkady, Warszawa 2000. Bielański A.: <i>Podstawy chemii nieorganicznej</i>. Wydawnictwo Naukowe PWN, Warszawa 2010.</p> <p>Laboratory classes:</p> <p>Prejzner J.: <i>Laboratorium chemii ogólnej i sanitarnej</i>. Wydawnictwo Politechniki Gdańskiej, Gdańsk 1991. /oraz pozostałe wydania/</p>	
	Supplementary literature	<p>(All literature in Polish)</p> <p>Lectures:</p> <p>Kowal A.L., Świdzka Bróz M.: <i>Oczyszczanie Wody. Podstawy teoretyczne i technologiczne, procesy i urządzenia</i>. Wydawnictwo Naukowe PWN, Warszawa 2007.</p> <p>Laboratory classes:</p> <p>Prejzner J.: <i>Laboratorium chemii ogólnej i sanitarnej</i>. Wydawnictwo Politechniki Gdańskiej, Gdańsk 1991. /oraz pozostałe wydania/</p>	
	eResources addresses	<p>Chemia dla kierunku Inżynieria Środowiska (niestacjonarne) - semestr letni 2020/2021 - Moodle ID: 8445 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=8445</p>	
Example issues/ example questions/ tasks being completed	Determinations and measurements of selected water components.		
Work placement	Not applicable		