

表 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

O literature and and	Senitory Engineering BC 00042250								
Subject name and code	Sanitary Engineering	, PG_0004335	.9						
Field of study	Environmental Engineering								
Date of commencement of studies	October 2020		Academic year of realisation of subject			2022/2023			
Education level	first-cycle studies		Subject group			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	5		ECTS credits			4.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Faculty of Civil and Environmental Engineering								
Name and surname	Subject supervisor dr inż. Krzysztof Szarf								
of lecturer (lecturers)	Teachers dr inż. Krzysztof Szarf								
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
of instruction	Number of study hours	30.0	30.0	0.0	0.0		0.0	60	
	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	60		5.0		45.0		110	
Subject objectives	The aim of the class is to introduce the students of Environmental Engineering course to civil engineering problems with a special focus on sanitary engineering topics.								
Learning outcomes	Course outcome		Subj	Subject outcome			Method of verification		
	[K6_U06] knows and applies the basic provisions of construction law, water law and environmental law		Student is aware of his part in the construction process Student knows current building codes			[SU1] Assessment of task fulfilment			
	[K6_U01] has the ability to self- education, can obtain information from literature, databases and other sources, uses information technology, Internet resources; can integrate the obtained information, make their interpretation, as well as draw conclusions and formulate and justify opinions		Student is able to choose a design method Student can interpret results of engineering calculations			[SU3] Assessment of ability to use knowledge gained from the subject			
	[K6_W08] has elementary knowledge of construction: including building materials, their strength, construction mechanics and building physics, moisture migration in buildings, heat transfer through building partitions		Student learns about methods of construction design Student gathers knowledge about engineering calculations of sanitary constructions			[SW1] Assessment of factual knowledge			

Subject contents							
	Lectures: - Introduction to civil engineering design in the framework of Eurocodes - Classification and review of sanitary engineering constructions used for: water supply, stormwater drainage, sewage transport and treatment - Basics of reinforced concrete construction design - Basics of foundation engineering - Trenchless technologies Auditorial classes: Calculations regarding design of such constructions as: open and subsurface tanks, stiff or elastic pipeline, stiff or elastic manhole						
Prerequisites and co-requisites	A number of classes passed cover and hydrology, foundation enginee	A number of classes passed covering the following topics: classical mechanics, soil mechanics, hydraulics and hydrology, foundation engineering, mechanics of materials, general construction. technology of concrete					
Assessment methods	Subject passing criteria	Passing threshold	Percentage of the final grade				
and criteria	design	100.0%	50.0%				
	test	50.0%	50.0%				
Recommended reading	Basic literature [1]Rangwala, S.C., Water Supply And Sanitary Engineering, Charotar Publishing House 2005						
	Supplementary literature	[2]Braja M. Das Fundamentals of Geotechnical Engineering, Cengage Learning, 2012					
	eResources addresses	Adresy na platformie eNauczanie: Budownictwo Sanitarne (V inż st IŚ) - zima 2022/2023 - Moodle ID: 24058 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=24058					
Example issues/ example questions/ tasks being completed	Exemplary test questions: 1. Describe constructions used for gathering rainwater 2. List trenchless methods and describe them 3. Characterise reinforced concrete underground tank construction problems Exemplary project topic: 1. Construction design of a rigid pipeline 2. Construction design of a tank						
Work placement	Not applicable						