GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00058839		
Field of study	Environmental Engineering		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2024/2025
Education level	first-cycle studies	Subject group	Optional subject group 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	3	Language of instruction	Polish
Semester of study	6	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department Of Sanitary Engineering -> Faculty Of Civil And Environmental Engineering -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Karolina Matej-Łukowicz	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	30.0	0.0	45

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	45	5.0	33.0	83

Subject objectives

The aim of the course is to supplement knowledge in the design and operation of water supply and sewage networks. The lectures include: odors in sewage systems, operation of water and sewage systems, and principles of operation and design of sewage pumping stations. During the exercises, students will work with design-supporting software and learn the principles of designing and implementing water supply nodes. During design classes, students learn about the process of preparing and coordinating design documentation.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U16] can, when formulating and solving engineering tasks in environmental engineering, evaluate, select and apply appropriate methods and tools, recognize their non-technical aspects, including environmental, economic and legal aspects	The student is able to assess the usefulness of methods and tools used to solve typical sewage engineering tasks.	[SU4] Assessment of ability to use methods and tools
[K6_U03] can prepare documentation regarding the implementation of an engineering task/project and prepare a text or presentation including a discussion of the results of the implementation	The student can present the finished project, prepare all the required paperwork, and is understands the office where it will be submitted for acceptance.	[SU1] Assessment of task fulfilment
[K6_U13] knows the rules of application and can choose the materials of the sanitary industry	The student is capable of applying the principles for selecting water and sewage pipes, including utilizing specialized software for this purpose.	[SU4] Assessment of ability to use methods and tools
[K6_W07] has a structured and theoretically founded knowledge in the field of materials used in the sanitary industry, their physico-chemical properties; knows and understands the basic processes of their production	The student possesses a theoretically organized knowledge of sanitary materials science, including an understanding of the physicochemical properties of materials and the processes involved in their production.	[SW3] Assessment of knowledge contained in written work and projects
[K6_W11] has elementary knowledge of electrical devices and installations as well as basics of control and automation	The student demonstrates a basic understanding of the operating principles of electrical installations and fundamental control and automation mechanisms.	[SW3] Assessment of knowledge contained in written work and projects

Subject contents

1. Odor neutralization in sewage networks

2. Water and sewage network failures

3. Sewage pumping stations

4. Programs supporting the design of water and sewage networks

5. Procedures for preparing design documentation

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Test	60.0%	50.0%
Desing	60.0%	50.0%

Recommended reading

Basic literature

Bolt A., Burszta-Adamiak E., Gudelis-Taraszkiewicz K., Suligowski Z., Tuszyńska A.: Sewage system, 2012.Suligowski Z., Fudala-Książek S.: Execution and acceptance of sewage networks, Warsaw 2016Heindrich Z.: Water supply and sewage system part 1, 1999Heindrich Z.: Water supply and sewage system part 2, 1999

	Supplementary literature	M. Skotnicki, M. Sowiński: Assessment of the retention capacity of a sewage collector / Journal of Civil Engineering, Environment and Architecture - 2014, Vol. 31, no. 61, pp. 265-283M. Skotnicki, M. Sowiński: Use of synthetic precipitation in modeling runoff from urban catchments / Scientific Papers of the Rzeszów University of Technology. Construction and Environmental Engineering / Publishing House of the Rzeszów University of Technology. - 2012, no. 283, no. 59 (2/12/I), pp. 201-218Weismann D.: Municipal sewage pumping stations. 2000
	eResources addresses	Adresy na platformie eNauczanie: Obiekty i uzbrojenie podziemne wod.-kan. - Moodle ID: 45800 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=45800
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.