



Subject card

Subject name and code	, PG_00058839							
Field of study	Environmental Engineering							
Date of commencement of studies	October 2023	Academic year of realisation of subject		2025/2026				
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 -> Faculties of Gdańsk University of Technology							
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Karolina Matej-Łukowicz					
Lesson types	Teachers							
	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar		
	Number of study hours	15.0	0.0	0.0	30.0	0.0		
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		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_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_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									
	[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_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									
Subject contents	<p>Course content – lecture</p> <p>1. Odor neutralization in sewage networks</p> <p>2. Water and sewage network failures</p> <p>3. Sewage pumping stations</p> <p>4. Programs supporting the design of water and sewage networks</p> <p>5. Procedures for preparing design documentation</p>											
Prerequisites and co-requisites												
Assessment methods and criteria	<table border="1"> <thead> <tr> <th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr> </thead> <tbody> <tr> <td>Desing</td><td>60.0%</td><td>50.0%</td></tr> <tr> <td>Test</td><td>60.0%</td><td>50.0%</td></tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Desing	60.0%	50.0%	Test	60.0%	50.0%
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Recommended reading	<p>Basic literature</p> <p>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</p>											

	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	
Example issues/ example questions/ tasks being completed		
Practical activites within the subject	Not applicable	

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