GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00059982		
Field of study	Environmental Engineering		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-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	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	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		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Katarzyna Kołecka	
	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	15.0	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	5.0	20.0	55

Subject objectives

The aim of the course is to familiarize students and to deepen their knowledge of the processing and management of waste and sewage sludge using biotechnology.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_K02] understands the need to formulate and communicate to the public information and opinions on the achievements in the environmental engineering and other aspects of the engineering activity in the sanitary sector; is aware of the importance and understands non-technical aspects and effects of engineering activities; strives to convey such information and opinions in a universally understandable manner, presenting various points of view	The student understands the need for formulating and communicating information and opinions to society regarding environmental engineering achievements, is aware of the importance, and understands the non-technical aspects and consequences of engineering activities. They make efforts to convey such information and opinions in a universally understandable manner, presenting various perspectives	[SK5] Assessment of ability to solve problems that arise in practice
K7_U10	The student is capable of designing an advanced technological scheme for the utilization of sewage sludge and waste management.	[SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject
K7_W07	The student has in-depth, organized, and theoretically grounded knowledge regarding the sewage sludge treatemnt and waste management.	[SW3] Assessment of knowledge contained in written work and projects
K7_U12	The student can analyze and evaluate, from both technical and economic perspectives, solutions and the operation of facilities for sewage sludge utilization and waste management	[SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject

<table>
<tr><td>Subject contents</td><td>The issue of sewage sludge and waste in Poland, legal issues related to the processing and management of sewage sludge and waste, and the fundamental processes utilized in sludge and waste biotechnology, primarily encompassing aerobic stabilization, anaerobic stabilization, and composting, as well as processes preparing sludge and waste for biotechnological procedures.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Knowledge of wastewater treatment processes used in WWTPs as well as waste management.</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Solution of the task as part of the project</td><td>50.0%</td><td>50.0%</td></tr>
<tr><td>Test from the lecture</td><td>50.0%</td><td>50.0%</td></tr>
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<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>-</td></tr>
<tr><td>Supplementary literature</td><td>-</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>-</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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