GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00059971		
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	prof. dr hab. inż. Aneta Łuczkiewicz	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	15.0	0.0	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	19.0	54

Subject objectives

The aim of the subject is to analyze legal standards, monitoring and analysis of environmental pollution related to energy sector. Determining the impact of pollution on the occurrence of specific diseases. Possibility of reducing emissions in the context of improving environmental quality and ensuring indoor comfort.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K7_U07	The student is able to plan and conduct field and laboratory research leading to the assessment of the effectiveness of the solutions used in environmental engineering	[SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment
[K7_U08] is able to assess risks in the implementation of engineering projects and implement appropriate safety rules	The student is able to assess threats when implementing engineering projects and implement appropriate mitigation strategy and safety rules.	[SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment
K7_W05	The student has knowledge of the impact of construction investments on the environment	[SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge
K7_W03	The student has in-depth, structured and theoretically based knowledge related to measurement, management and environmental monitoring	[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects

<table>
<tr><td>Subject contents</td><td>Lectures

Trends in emissions of industrial pollutants related to energy sector. Legal acts referring to monitoring in-door and out-door environmental quality in energy systems. Division of sources depending on the pollutants emission and spread. Characterization of pollutants and their persistence in the environment. Costs of industrial air pollution - the impact of pollution on the occurrence of specific diseases. Ways to mitigate and eliminate pollutants emissions. Reducing industrial pollution - assessment, legislation and implementation. Public accountability - access to industrial emissions data

Laboratories: Quality of water used in energy systems. Analysis of hygienic and sanitary conditions and the possibility of spreading microbiological factors in areas occupied by people. Methods for maintaining ventilation and air conditioning installations. Methods confirming the cleanliness of the installation</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Basis of environmental microbiology and chemistry as well as of environmental engineering</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>laboratories - presentation</td><td>40.0%</td><td>40.0%</td></tr>
<tr><td>Lecture - test</td><td>60.0%</td><td>60.0%</td></tr>
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<tr><td>Recommended reading</td><td>
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<tr><td>Basic literature</td><td>Wykonawczy Program Państwowego Monitoringu Środowiska

Informacje dotyczące systemu monitoringu jakości powietrza w Polsce</td></tr>
<tr><td>Supplementary literature</td><td>-</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
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<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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