



Subject card

Subject name and code	Master thesis, PG_00059965						
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					
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	2	Language of instruction			Polish		
Semester of study	3	ECTS credits			18.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Environmental Engineering Technology -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Małgorzata Szopińska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	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		Self-study	SUM
	Number of study hours	0		30.0		420.0	450
Subject objectives	<p>The aim of the course is to prepare the student for the independent completion of a master's thesis, based on the analysis of theoretical and/or practical issues in the field of environmental engineering.</p> <p>During the course, the student develops research and analytical skills, deepens their specialized knowledge, and improves competencies in scientific writing, presenting research results, and defending their own conclusions.</p> <p>The final outcome is the development and submission of a master's thesis, which serves as evidence of the acquired knowledge and the ability to apply it in solving complex engineering and environmental problems.</p>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_W12] has knowledge of contemporary and useful principles on data acquisition, filtration, processing and analysis	The student is able to select and apply appropriate methods of data acquisition, processing, and analysis necessary for completing a master's thesis in the field of environmental engineering.	[SW3] Assessment of knowledge contained in written work and projects
	[K7_U05] can rely on scientific sources for modern methods and technologies, and propose trends in the development of methods and rules for acquiring, filtering, processing and analyzing data	The student uses up-to-date scientific sources to analyze modern methods and technologies applied in environmental engineering and is able to indicate trends in their further development based on relevant data and its analysis.	[SU1] Assessment of task fulfillment [SU5] Assessment of ability to present the results of task
	K7_U09	The student is able to independently plan and carry out the learning process necessary for completing the master's thesis, identify knowledge gaps, and take steps to fill them.	[SU2] Assessment of ability to analyse information [SU5] Assessment of ability to present the results of task
	[K7_U01] can obtain information from literature, databases and other sources; can integrate the obtained information, interpret and critically evaluate them, draw conclusions, and formulate and comprehensively justify the opinions	The student independently searches for and selects information from professional literature, databases, and online sources, critically analyzes and interprets the data, and formulates logical conclusions supported by well-founded arguments related to the engineering problem being addressed.	[SU1] Assessment of task fulfillment [SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools
[K7_W10] has knowledge of the protection and management of intellectual, industrial and copyright resources	The student knows and applies the principles of intellectual property protection and copyright law when preparing the master's thesis, including proper citation of sources and the use of graphical materials and data.	[SW3] Assessment of knowledge contained in written work and projects	
Subject contents			
Prerequisites and co-requisites	<p>Selection of a thesis topic: The student must choose a topic for the masters thesis in consultation with their supervisor, ensuring it aligns with their research interests and skills.</p> <p>Preliminary literature review: The student should familiarize themselves with the relevant academic literature and selected research studies in the field of environmental engineering.</p> <p>Knowledge of research methods and analytical tools: The student should possess basic knowledge of data analysis methods and tools used in environmental engineering (e.g., statistical analysis software, environmental modeling tools).</p> <p>Completion of previous academic stages, including projects and internships: Active participation in prior stages of the program, including research projects, internships, or seminars, is required.</p>		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Master's thesis	60.0%	100.0%
Recommended reading	Basic literature	in line with the thesis topic	
	Supplementary literature	in line with the thesis topic	
	eResources addresses		

<p>Example issues/ example questions/ tasks being completed</p>	<p>Data Analysis:</p> <ul style="list-style-type: none"> • What data analysis techniques are used in a master's thesis that involves laboratory studies related to water or soil quality? • What errors may occur during data analysis, and how can they be identified and minimized? • What data visualization methods (e.g., charts, maps) are most appropriate for a thesis focused on air quality analysis? <p>Formulating Conclusions:</p> <ul style="list-style-type: none"> • What is critical analysis of research results in the context of environmental engineering, and how should recommendations be presented based on the obtained results? <p>Writing the Master's Thesis:</p> <ul style="list-style-type: none"> • What structural elements should a well-written master's thesis in environmental engineering include? • What are the rules for citing sources in a master's thesis according to current academic standards?
<p>Practical activities within the subject</p>	<p>Not applicable</p>

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