

Subject card

Subject name and code	Waste Disposal in Companies, PG_00081021						
Field of study	Business and Environmental Technology						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2024/2025		
Education level	Master's studies	Subject group					
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	academic	Assessment form			exam		
Conducting unit	Laboratory of Catalytic Materials and Processes -> Department of Environmental Technology -> Faculty of Chemistry -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Joanna Drzeżdżon				
	Teachers		dr Joanna Drzeżdżon				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	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	15		0.0		0.0	15
Subject objectives	Familiarize students with the legal aspects and modern methods and technologies of waste management.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BiTEMU2_W10] explains the mechanisms of unit processes used in remediation and environmental protection as well as waste management methods	Explains the importance of instruments used in waste management to protect the environment.	[SW4] test/exam - oral or written
	[BiTEMU2_W09] predicts the effects of human interference in the natural environment and analyzes the impact of human activity on the quality of the environment on a local, regional and global scale	Explains the importance of instruments used in waste management to protect the environment.	[SW1] oral statement/conversation/discussion
	[BiTEMU2_U09] plans and performs research tasks in the field or laboratory and interprets research results on environmental protection issues	Performs laboratory tests on waste management according to instructions waste and prepares written reports on their completion;	[SU2] presentation/project/paper/report
	[BiTEMU2_U08] searches, selects and analyzes the literature on environmental sciences, including scientific journals and databases, reading and understanding scientific texts in the native language and English	Relates the importance of developing waste management technologies to the good health of the environment and human health;	[SU1] oral statement/conversation/discussion
	[BiTEMU2_W11] applies safety and hygiene rules when working independently at a research or measurement station in the laboratory or in the field	Follows the safety rules of the laboratory chemistry;	[SW4] test/exam - oral or written
	[BiTEMU2_K02] is able to cooperate and work in a group, assuming responsible roles	Characterizes methods and explains operation of equipment used to dispose of waste;	[SK1] oral statement/conversation/discussion
	[BiTEMU2_U06] uses advanced methods, techniques, and tools to assess the quality of the environment and the effectiveness of the technological processes used	Describes solutions that make technologies less burdensome to the environment	[SU1] oral statement/conversation/discussion
	[BiTEMU2_K07] demonstrates responsibility for the safety of one's own work and that of others, taking into account the risks resulting from the research techniques used, and creates conditions for safe work in the laboratory or in the field	Follows the safety rules of a chemical laboratory;	[SK1] oral statement/conversation/discussion
	[BiTEMU2_U05] is able to give a presentation and independently prepare various specialized written works appropriate for the field studied or in the area on the border of various scientific disciplines, using basic theoretical approaches, collecting various sources of data, their description and interpretation, and drawing conclusions based on scientific literature and the results of own research work	Cooperates as part of a team when performing laboratory tests and developing results.	[SU5] implementation of a problem task
	[BiTEMU2_U07] proposes processes and methods of water treatment, sewage and waste gas treatment, environmental remediation, and waste management used in environmental protection	Explains the importance of instruments used in waste management to protect the environment.	[SU1] oral statement/conversation/discussion
	[BiTEMU2_W02] distinguishes legal and administrative mechanisms and procedures in environmental protection and interprets its international dimension	Describes solutions that make technologies less burdensome to the environment.	[SW4] test/exam - oral or written
	[BiTEMU2_K03] is able to properly define priorities and plan and organize tasks related to their implementation, as well as monitor and evaluate progress	Plans, performs and interprets analyses of environmental quality and properties of waste.	[SK1] oral statement/conversation/discussion

	Course outcome	Subject outcome	Method of verification
	[BiTEMU2_W01] describes the relationship between economics and ecological technology, their place in the system of social and exact sciences	Explains the principles of selecting waste disposal technologies.	[SW1] oral statement/ conversation/discussion
Subject contents	National and European Union law in the field of waste management. Waste - definitions, interpretations. Catalog of waste. Municipal waste - mixed, hazardous, biodegradable, special, waste oils, batteries and accumulators. Municipal sewage sludge. Waste Medical and veterinary waste. Waste management plans. The impact of provisions in the plans on the conduct of activities related to the generation and circulation of waste. General principles in waste management - prevention and prevention, generation, waste generator and holder, storage, recycling/recovery, disposal, transportation, collection, conducting activities related to the turnover and processing of waste. Entrepreneur as a recipient of law in the field of waste management - consents, permits, decisions, reports. Records, reports, documents in waste turnover. Packaging waste. End-of-life vehicles. Waste electrical and electronic equipment. Cross-border shipments of waste. Fees in waste management. Penalties for violations of regulations in waste management. Financing of investments in waste management.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Written exam with test and open questions	51.0%	100.0%
Recommended reading	Basic literature	Instructions for laboratory exercises developed by the staff of the Department of Environmental Technology Legal acts related to waste management	
	Supplementary literature	1. Rosik-Dulewska C., Basics of waste management, PWN, Warsaw 2012. Jędrzcak A., Biological processing of waste, PWN, Warsaw 2007. 3. Dymaczewski Z. (ed), Handbook of a wastewater treatment plant operator, PZliTS, Poznań 2011	
	eResources addresses		
Example issues/ example questions/ tasks being completed	National and European Union law in the field of waste management. Waste - definitions, interpretations. Catalog of waste. Municipal waste - mixed, hazardous, biodegradable, special, waste oils, batteries and accumulators. Municipal sewage sludge. Medical and veterinary waste. Waste management plans. The impact of provisions in plans on the conduct of activities related to the generation and circulation of waste. General principles in waste management - prevention and prevention, generation, producer and holder of waste, storage, recycling/recovery, disposal, transportation, collection, conducting activities related to the turnover and processing of waste. Entrepreneur as a recipient of law in the field of waste management - consents, permits, decisions, reports. Records, reports, documents in waste handling. Packaging waste. End-of-life vehicles. Waste electrical and electronic equipment. Cross-border movement of waste. Fees in waste management. Penalties for violations of regulations in waste management. Financing of investments in waste management.		
Work placement	Not applicable		

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