University of Gdańsk

Subject card

Subject name and code	Waste management, PG_00054834		
Field of study	Environmental Protection		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	postgraduate studies	Subject group	Obligatory subject group 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 polish
Semester of study	1	ECTS credits	2.0
Learning profile	academic	Assessment form	
Conducting unit	Pracownia Fotokatalizy -> Katedra Technologii Środowiska -> Faculty of Chemistry		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Anna Gołąbiewska	
	Teachers	dr inż. Anna Gołąbiewska	

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	2.0	33.0	50

Subject objectives	To familiarize students with the main problems related to waste management.Practical familiarization of students with waste disposal methods, waste recycling and quantitative analysis of selected waste components.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OŚMU2_U09] Interprets policy documents in the field of environmental protection in relation to Polish and international legal regulations.	1. Is able to properly determine priorities for the implementation of tasks by himself or others, 2. Maintains openness to new solutions related to waste management, 3. Explains to others the importance of proper waste management for environmental protection and respect for natural resources,	[SU4] test/exam - oral or written
[OŚMU2_W08] Explains the mechanisms of unit processes used in environmental protection and waste management methods.	1. Knows the basic links in the waste management chain 2. Understands the need for waste recovery/recycling and how to achieve it 3. Knows the basic legal provisions regulating waste management 3. Understands the basic concepts related to waste management: recovery, disposal, recycling 4. Knows the construction of typical waste management installations 5. Knows the negative factors of waste storage and incineration 6. Knows methods of preventing the negative impact of landfills and incineration plants on the environment	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
[OŚMU2_K08] Initiates and takes into account in the organizational activity the activities for the social environment and public interest.	1. Knows the negative factors of waste storage and incineration 2. Knows methods of preventing the negative impact of landfills and incineration plants on the environment	[SK4] test/exam - oral or written
[OŚMU2_W07] Distinguishes between legal and administrative mechanisms and procedures in environmental protection and interprets its international dimension.	1. Is able to interpret legal and administrative procedures in environmental protection	[SW5] implementation of a problem task
[OŚMU2_K04] Leads the group and bears responsibility for it.	1. Is able to work in a group and take responsibility for the group	[SK4] test/exam - oral or written [SK8] observation of student's independent or team work
[OŚMU2_K02] Recognises threats, creates safe work conditions and is responsible for the safety of own and other people's work.	Is responsible for the safety of his own and others' work.	[SK8] observation of student's independent or team work

Subject contents

Definition and classification of waste. The history of waste. Basic concepts and issues. Legal basis of waste management. Waste classification.Organic waste. Waste from the poultry industry, dairy industry,Municipal waste. Storage of waste. Method of disposal. Processing of animal raw materials. Hazardous wasteEnergy waste.Industrial waste.Mineral waste raw materials.

Prerequisites and co-requisites

entry requirements:Knowledge of the basics of general chemistry, organic chemistry, inorganic chemistryAdditional requirements:analytical chemistry

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
written test	51.0%	100.0%

Recommended reading

Basic literature

1. Czesława Rosik-Dulewska, Podstawy gospodarki odpadami, PWN, Warszawa 2015.
2. Bernd Bilitewski, Georg Hardtle, Klaus Marek, Podrecznik gospodarki odpadami, teoria i praktyka, Wydawnictwo Seidel-Przewecki, 2006.
3. Zespoł autorow pod redakcja dr hab. Krzysztofa Skalmowskiego, Poradnik gospodarowania odpadami, Wydawnictwo Verlag Dashofer, Warszawa 2014.

	Supplementary literature	science publications
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	1.Types of artificial seals, their tasks. Compare plastics made of PVC and PE.2. List and describe the factors influencing the fermentation process.3. List and describe 3 parameters influencing the composting process.	
Work placement	Not applicable	

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