GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Environment management and ecology, PG_00055069		
Field of study	Management and Production Engineering		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2025/2026
Education level	first-cycle 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	4	Language of instruction	Polish
Semester of study	7	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Institute of Energy -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Blanka Jakubowska	
	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	8.0	37.0	75

Subject objectives	The aim of this course is to make students familiarize with the notions: causes and effects of environmental degradation, processes of purification and restoration of environmental resources, and familiarization with the current legal status, models and concepts of environmental management and the structure of environmental management in Poland.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_K02] is able to interact and work in a group, assuming different roles, can inspire and organize the learning process of others, properly identifies priorities for realization of a task specified by themselves or others	The student is aware of the importance of pro-environmental activities. The student is able to make environmentally friendly decisions, cooperate in a team, presents arguments taking into account a different point of view. The student understands the need for ecological education of the society in terms of the impact of economic decisions on the environment. The student is able to assess the skills and use them in teamwork.	[SK2] Assessment of progress of work [SK5] Assessment of ability to solve problems that arise in practice
	[K6_W08] has basic management knowledge, including process and product quality management, and detailed knowledge of integrated and standardized quality, environmental, health and safety management systems	The student knows the concept of the environmental management system model and the types of environmental protection processes. The student is able to make the characteristics of the management object and indicate the inter-system relations. The student knows and follows the principles of occupational health and safety.	[SW3] Assessment of knowledge contained in written work and projects
	[K6_U11] is able to identify and formulate simple engineering tasks related to the diagnostics of the technical condition of machines and devices using appropriate methods, techniques and tools	The student is able to combine social, economic and ecological issues with the issues of environmental protection.	[SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment

Subject contents

Lecture: Causes and effects of environmental degradation.Methods of purification and restoring environmental resources.The concept of sustainable development.Activities in the field of environmental protection.Industrial ecology.Models and definitions of environmental management and environmental management.Environmental management systems.Ecological and legal aspects of management systems.Best practices in technique and technologies.Primary and secondary methods for the elimination or reduction of emissions harmful to the environment.Laboratory: Various techniques of environmental engineering - sorting materials, mixing, separating pollutants. Economic issues related to the valuation of the use of the environment.

Prerequisites and co-requisites

Fundamentals of physics, chemistry and fluid mechanics

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
lecture	56.0%	50.0%
laboratory	56.0%	50.0%

Recommended reading

Basic literature	R. Zarzycki, M. Imbierowicz, M. Stelmachowski, "Wprowadzenie do inżynierii i ochrony środowiska. Ochrona środowiska naturalnego", Wydawnictwa Naukowo-Techniczne, Warszawa, 2007 B. Poskrobko, "Zarządzanie Środowiskiem", Polskie Wydawnictwo Ekonomiczne, Warszawa, 1998 "Ekonomia i Środowisko", Czasopismo Europejskiego Stowarzyszenia Ekonomistów Środowiska i Zasobów Naturalnych, 4 (47), 2013 G. Dobrzański, B. M. Dobrzańska, D. Kiełczewski, " Ochrona środowiska przyrodniczego", Wydawnictwo Ekonomia i Środowisko, Białystok, 1997 J. Kuckowski, D. Laudyn, M. Przekwas, " Energetyka a ochrona środowiska", Wydawnictwa Naukowo-Techniczne, Warszawa, 1993
Supplementary literature	-

	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Explain what a product life cycle analysis is all about, which is used as an indicator in the ISO 14000 series standard List the motives and briefly describe the concepts of environmental protection	
Work placement	Not applicable	

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