GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Introduction to Environmental Science, PG_00049190		
Field of study	Chemical Technology		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2022/2023
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	1	Language of instruction	Polish
Semester of study	1	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Analytical Chemistry -> Faculty of Chemistry		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Paweł Kubica	
	Teachers	dr inż. Paweł Kubica	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	0.0	0.0	0.0	0.0	30

E-learning hours included: 0.0

Wstęp do Wiedzy o Środowisku TCh i ZT 2022/2023 - Moodle ID: 20754
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=20754

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	2.0	18.0	50

Subject objectives

Students are familiarized with the fundamentals about environmental issues.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K6_K02	Student understands the impact of undertaken technological activities on the environment. In addition, Student can use the principles of professional ethics.	[SK5] Assessment of ability to solve problems that arise in practice
K6_W12	The student knows and understands the terms used in environmental protection and processes affecting the environment.	[SW1] Assessment of factual knowledge
K6_W03	The student knows the issues related to the impact of technological processes on the environment. Students can: - class technological solutions because of their environmental nuisance - to use in practice referred to technological solutions.	[SW1] Assessment of factual knowledge
K6_U05	Student is able to recognize dependencies between technological processes and understands its influence on the environment.	[SU2] Assessment of ability to analyse information

Subject contents

Basic information about the environment and its components. Classifications sources of emissions to the environment due to: - Sources of emissions: - Nature of human activity - The range of the impact of emission sources. Classification of processes due to: - Degree of impact to the environment - How to eliminate the impact of technological systems on the environment. Basic information on how to waste gas, waste water treatment and utilization of by-products and waste. Presentation of the basic processes and responses, which are subject to contamination at the stage of environmental emissions. Discussion of the basic techniques of environmental protection against pollution (protection of restoration, remediation and prevention technologies, emissions). The importance of the various elements of the environment for technological processes.

Prerequisites and co-requisites

Knowledge of the fundamentals of chemistry

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Exam	60.0%	100.0%
Recommended reading	Basic literature	1. J. H. Rule, Problemy nauki o środowisku, Wydawnictwo UMCS, Lublin 1994 2. B. J. Alloway, D. C. Ayres, Chemiczne podstawy zanieczyszczenia środowiska, Wydawnictwo Naukowe PWN, Warszawa, 1999 3. E. U. von Weizsacker, A. B. Lowins, L. H. Lovins, mnożnik cztery (podwojony dobrobyt – dwukrotnie mniejsze zużycie zasobów naturalnych), Wydawnictwo „Rolewski“, Toruń, 1999 4. P. O'Neill, Chemia środoiwska, Wydawnictwo Naukowe PWN, Warszawa, 1997 5. A. Johansson, Czysta technologia, Środowisko- Technika-Przyszłość, WNT, Warszawa, 1997	
	Supplementary literature	1. S. F. Zakrzewski, Podstawy toksykologii środowiska, Wydawnictwo Naukowe PWN, Warszawa, 1995	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		