GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Environmetrics, PG_00036302		
Field of study	Green Technologies		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research 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	Department of Pharmaceutical Technology and Biochemistry -> Faculty of Chemistry		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Tomasz Laskowski	
	Teachers	dr inż. Julia Borzyszkowska-Bukowska dr inż. Paweł Szczeblewski dr hab. inż. Tomasz Laskowski	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	30.0	0.0	0.0	45

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	45	2.0	28.0	75

Subject objectives

The aim of this course is to familiarize Student with major chemometric techniques and the use of thereof in environmetal monitoring and widely considered environmental sciences.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U03] is able to use information and communication technologies relevant to the common tasks of engineering, is able to use known methods and mathematical-physical models to describe and explain phenomena and chemical processes		
[K6_W01] has a basic knowledge from some branches of mathematics and physics useful for formulating and solving simple problems in the field of environmental technologies and modern analytical methods		

Subject contents

1. Introduction to chemometrics in environmental sciences, data documentation and storage.
2. Data control.
3. Data processing, visual analysis.
4. Exploratory analysis.
5. Classification.
6. Dependence modelling and experimental planning.

Prerequisites and co-requisites

1. Knowledge on the basics of statistics.
2. Advanced usage of a spreadsheet.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
homeworks	60.0%	20.0%
final project	60.0%	30.0%
test exam	60.0%	50.0%

Recommended reading	Basic literature	1. Chemometria praktyczna, Jan Mazerski, Malamut Press. 2. Practical Guide to Chemometrics, edited by Paul Gemperline, Taylor & Francis, 2006.
	Supplementary literature	- none -
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	A Student is asked to prepare his/her own dataset, state a scientific problem and solve this problem using chemometric techniques.	
Work placement	Not applicable	