GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Methods of Design of Experiments, PG_00039756		
Field of study	Materials Engineering, Materials Engineering, Materials Engineering, Materials Engineering		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2022/2023
Education level	first-cycle studies	Subject group	Optional subject group
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	6	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Instytut Nanotechnologii i Inżynierii Materiałowej -> Faculty of Applied Physics and Mathematics		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Bogusław Kusz	
	Teachers	prof. dr hab. inż. Bogusław Kusz	

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	2.0	18.0	50

Subject objectives

Learning how to plan an experiment which help to solve a scientific problem in the field of materials science.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K6_K02	The student can work in a team.	[SK4] Assessment of communication skills, including language correctness
K6_W04	The student knows the standard measuring instruments.	[SW3] Assessment of knowledge contained in written work and projects
K6_W06	The student knows the basic methods of solving basic engineering problems.	[SW3] Assessment of knowledge contained in written work and projects
K6_U06	The student is able to evaluate and use information.	[SU2] Assessment of ability to analyse information
K6_K01	The student knows his abilities and limitations.	[SK3] Assessment of ability to organize work

Subject contents

1. Reason and experiment as ways of knowing reality. 2. Object of research and types of experiment plans. 3. Planning, analysis of measurement results and uncertainties, and publication of the results of simple and complex experiments.

Prerequisites and co-requisites

There isn't

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
zaliczenie pisemne	51.0%	41.0%
ocena sprawozdań	100.0%	59.0%

Recommended reading

Basic literature	Internet
Supplementary literature	not applicable
eResources addresses	Podstawowe https://enauczanie.pg.edu.pl/moodle/course/view.php?id=30262 - e-course Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	1. The ability to calculate the standard deviation of the average value of the results of many measurements. 2. The ability to calculate the uncertainty of a complex quantity. 3. The ability to create a chart (graph of the function) on the basis of tabular data and to determine from the chart the basic parameter of the process described by the chart. Description with as much information as possible. 4. Ability to plan a simple experience. 5. What is a scientific problem and a non-scientific problem (according to own knowledge and according to K. Popper). 6. Description of the test object (general scheme): input/output and control variables, noise. 7. Experimental plan - types of plans: total, selective, optimized, randomized,
Work placement	Not applicable