GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Informatics I, PG_00039783					
Field of study	Materials Engineering, Materials Engineering, Materials Engineering					
Date of commencement of studies	October 2021		Academic year of realisation of subject		2021/2022	
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	2		ECTS credits		4.0	
Learning profile	general academic profile		Assessment form		assessment	
Conducting unit	Department of Electrochemistry, Corrosion and Materials Engineering -> Faculty of Chemistry					
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Łukasz Gaweł			
	Teachers		dr inż. Łukasz Gaweł			

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						
	Adresy na platformie eNauczanie:						

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	12.0	43.0	100

Subject objectives	Mastering the advanced level in Excel spreadsheet, by learning processing, statistical analysis and creating basic programs to process of experimental data. In addition, the student will acquire knowledge of the basic programming language Python, to provide visualization of the experimental data with the use of libraries Matplotlib

Learning outcomes	Course outcome	Subject outcome	Method of verification
	K6_W01	The student has knowledge of statistical analysis, regression equations, and how to use them correctly for experimental data.	[SW1] Assessment of factual knowledge
	K6_U04	The student is able to use various software to analyze and process experimental data.	[SU4] Assessment of ability to use methods and tools
	K6_W05	The student has knowledge of computer use, extension files for various purposes, and how to process them.	[SW1] Assessment of factual knowledge
	K6_K01	The student is able to use libraries and scientific aids to improve their competence in the field of data analysis programs	[SK5] Assessment of ability to solve problems that arise in practice

Subject contents	Lectures: 1-8 Using spreadsheets in practice, discussing the MS Office suite and related programs 9-15 Using the Python language in processing experimental data package

Prerequisites and co-requisites	Basic knowledge of mathematics, course of functions and statistics Basic knowledge of computer and peripheral devices Knowledge of how to use the Windows environment		

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Lecture	60.0%	40.0%
	Laboratory	60.0%	60.0%

Recommended reading	Basic literature	Microsoft Excel 2013. Krok po kroku- C.D. Frye Excel 2016 PL. Programowanie w VBA- A. Michael, R. Kuslejka Matplotlib for Python Developers- A. Yim, C. Chung, A. Yu
	Supplementary literature	Online documentation, step-by-step courses and videos available on popular websites.
	eResources addresses	

Example issues/ example questions/ tasks being completed	Description of experimental data using the regression function. Use of the "if" function Statistical analysis of experimental data using the student's t test.

Work placement	Not applicable