

Subject card

Subject name and code	Informatics I, PG_00039783								
Field of study	Materials Engineering, Materials Engineering, Materials Engineering								
Date of commencement of	October 2021	Academic year of			2021/2022				
studies			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 Electro	Department of Electrochemistry, Corrosion and Materials Engineering -> Faculty of Chemistry							
Name and surname	Subject supervisor		dr inż. Łukasz Gaweł						
of lecturer (lecturers)	Teachers		dr inż. Łukasz Gaweł						
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Project		Seminar	SUM	
of instruction	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 classes include 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 spreadshed 9-15 Using the Pytho package				e and re	elated p	rograms		

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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	Excel 2016 PL. Programowanio	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						

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