



Subject card

Subject name and code	Informatics I, PG_00039783						
Field of study	Materials Engineering, Materials Engineering, Materials Engineering, Materials Engineering						
Date of commencement of studies	October 2020		Academic year of realisation of subject		2020/2021		
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 Gawel				
	Teachers		dr inż. Łukasz Gawel				
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: Informatyka lato 2021 - Moodle ID: 10716 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=10716						
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 programs9-15 Using the Python language in processing experimental datapackage						
Prerequisites and co-requisites	Basic knowledge of mathematics, course of functions and statisticsBasic knowledge of computer and peripheral devicesKnowledge of how to use the Windows environment						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Laboratory		60.0%		60.0%		
	Lecture		60.0%		40.0%		

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	Informatyka lato 2021 - Moodle ID: 10716 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=10716
Example issues/ example questions/ tasks being completed	Description of experimental data using the regression function.Use of the "if" functionStatistical analysis of experimental data using the student's t test.	
Work placement	Not applicable	