



## Subject card

Subject name and code	Spreadsheets, PG_00044129						
Field of study	Mathematics						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2024/2025		
Education level	first-cycle studies		Subject group		Optional subject group 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	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Anna Szafrńska				
	Teachers		dr inż. Anna Szafrńska				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	15.0	15.0	0.0	60
	E-learning hours included: 0.0						
	Adresy na platformie eNauczanie: Arkusze kalkulacyjne 2024/2025 - Moodle ID: 44179 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=44179">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=44179</a>						
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	60		5.0		35.0	100
Subject objectives	In the course, students will learn (theoretically and practically) about advanced functions of spreadsheets (Excel 2016) with particular emphasis on the VBA language.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K6_W08		The student uses advanced tools available in Excel. Can use VBA to analyze data.		[SW1] Assessment of factual knowledge		
	K6_U12		The student analyzes the data using statistical functions available in Excel.		[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		
	K6_U10		The student can use advanced functions in Excel and program in VBA (Visual Basic for Applications).		[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		
Subject contents	Spreadsheet History. Data types and cell formatting. Data visualization (conditional formatting, sorting, subtotals, charts). Pivot tables and charts. Data analysis in a spreadsheet (including mathematical and statistical functions). Macros. Cooperation with databases.						
Prerequisites and co-requisites	Knowledge of the basics of Excel from the subject of Information Technologies.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	project		50.0%		40.0%		
	laboratory		50.0%		40.0%		
	test (theory)		50.0%		20.0%		

Recommended reading	Basic literature	John Walkenbach, Excel 2016 PL. Biblia, Helion, Gliwice 2016  Michael Alexander, Richard Kusleika, Excel 2016 PL. Programowanie w VBA. Vademecum Walkenbacha, Helion, Gliwice 2017
	Supplementary literature	Piotr Walędziak, Excel. Nauka na przykładach, 2018
	eResources addresses	Arkusze kalkulacyjne 2024/2025 - Moodle ID: 44179 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=44179">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=44179</a>
Example issues/ example questions/ tasks being completed	Sort the table in multiple levels. Use conditional formatting to highlight certain table elements. Draw and format a chart.	
Work placement	Not applicable	

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