



Subject card

Subject name and code	Visualization of economic data, PG_00053007						
Field of study	Data Engineering						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2026/2027		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study 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	3		Language of instruction		English		
Semester of study	5		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Olgun Aydin				
	Teachers		dr Olgun Aydin				
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						
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		2.0		28.0	75
Subject objectives	The aim of the course is to acquire the skills needed to construct effective communication in the visual business communication with the help of IT tools and solutions.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U02] prepares and presents convincingly professional presentations of the results of undertaken activities, with their advanced interpretation		The student prepares and presents convincing professional visual analyses.		[SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools		
	[K6_W03] identifies veracious sources of information relevant to the analyzed issues		The student identifies reliable sources of visual information and uses appropriate data visualization methods for effective business communication.		[SW2] Assessment of knowledge contained in presentation		

Subject contents	History of statistical graphic			
	Visualization of information in business and engineering communications. The role of visual information in the decision-making process			
	Ergonomics of visual communication. Perceptual characteristics of the users. Perceptual and cognitive limitations of the user			
	Basic forms of presentation of visual information: diagrams, charts, diagrams			
	Visualization of quantitative data			
	Visualization of qualitative data			
	Exploration of statistical interactions			
	Exploration of time series			
	Cluster analysis (Wards method, k-means method)			
	Fundamentals of GIS			
Prerequisites and co-requisites	No requirements			
	Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		written cologium	60.0%	50.0%
		laboratory exercises	60.0%	50.0%
	Recommended reading	Basic literature	Biecek P. „Odkrywać! Ujawniać! Objasniać! Zbiór esejów o sztuce pokazywania danych”, 2014.	
			Tufte E.R., „The visual display of quantitative information”, 2001	
			Wilkinson L., “The Grammar of Graphics", 2005.	
		Supplementary literature	Clarke K.C., „Getting started with geographic Information Systems”, 2001.	
		Murray S.: Interaktywna wizualizacja danych. Wyd. Helion Warszawa 2013.		
		Tufte E.: Envisioning Information. Graphic Press, Cheshire, CY, USA, 1996.		
	eResources addresses	Adresy na platformie eNauczanie:		
Example issues/ example questions/ tasks being completed	- developing the presentation of data related to a selected phenomenon			
	- evaluation of usability and clarity of the visual transmission			
	- principles of the data presentation for business analytics			

Work placement	Not applicable
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