



Subject card

Subject name and code	DATA MINING, PG_00053164							
Field of study	Economic Analytics							
Date of commencement of studies	October 2022	Academic year of realisation of subject			2022/2023			
Education level	second-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	1	Language of instruction			English			
Semester of study	1	ECTS credits			3.0			
Learning profile	general academic profile	Assessment form			assessment			
Conducting unit	Department of Informatics in Management -> Faculty of Management and Economics							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Nina Rizun					
	Teachers		dr Nina Rizun					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM	
	Number of study hours	0.0	0.0	30.0	0.0	0.0	30	
	E-learning hours included: 0.0							
DATA MINING (Field of study: Economic analytics 1st semester) -2022 - Moodle ID: 23764 https://enauzanie.pg.edu.pl/moodle/course/view.php?id=23764								
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	30		6.0		39.0	75	
Subject objectives	Application of the data mining technologies and algorithms in the decision processes in organization							
Learning outcomes	Course outcome		Subject outcome			Method of verification		
	[K7_U14] can improve oneself through the systematic acquisition of knowledge and skills		Student can improve through a systematic acquisition of knowledge and skills.			[SU1] Assessment of task fulfilment		
	[K7_U04] can forecast complex socio-economic processes and phenomena using advanced methods and tools for the analysis of quantitative and qualitative data		Student can predict complex processes and socio-economic phenomena using advanced methods and tools to analyze quantitative and qualitative data.			[SU4] Assessment of ability to use methods and tools		
	[K7_U06] has a broad knowledge of methods and tools for acquiring and collecting data, as well as analysing, explaining and reasoning on socio-economic phenomena and processes.		Student has an extensive knowledge of methods and tools capture and collection of data and their analysis, explanation and reasoning about the phenomena and socio-economic processes.			[SU3] Assessment of ability to use knowledge gained from the subject		
	[K7_W02] has a broadened knowledge of how to describe economic phenomena using quantitative methods		Student has expanded knowledge of how to describe economic phenomena using quantitative methods.			[SW1] Assessment of factual knowledge		
	[K7_W10] has an in-depth knowledge of quantitative methods to describe and analyse socio-economic processes using information technology		Student has in-depth knowledge of quantitative methods for describing and analyzing the socio-economic processes using information technology.			[SW2] Assessment of knowledge contained in presentation		
Subject contents	Introduction to Data Mining. Support for management decisions using information technology in the Big Data age. Obtaining a competitive advantage through the use of text mining methods. R Language for textual data exploration. Social Network Analysis							
Prerequisites and co-requisites	The basis of the computer science							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Practical exercise	60.0%	80.0%
	Attendance in the lectures	80.0%	20.0%
Recommended reading	Basic literature	<ol style="list-style-type: none"> 1. Arkadiusz Januszewski; Funkcjonalność Informatycznych systemów zarządzania - Zintegrowane systemy transakcyjne; PWN W-wa 2018 pod red. Stanisław Wrycza; 2. Informatyka ekonomiczna; PWE Warszawa 2019 3. A. Ohri. 2012. <i>R for Business Analytics</i>. Springer Publishing Company, Incorporated. 4. Pollak, B. (Ed.): <i>Ultra-Large-Scale Systems</i>, 150 pages, ISBN: 0-9786956-0-7, June 2006. 5. Kelly, K., On the next 5,000 days of the web, TED Talk, 2007, 	
	Supplementary literature	1. Supplementary materials for laboratories	
	eResources addresses		
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> 1. R as a BI tool 2. Zipf's word frequency law in natural language 3. Text preprocessing steps 4. TF-IDF transformation 5. Topic Modeling using Latent Dirichlet Allocation algorithm 6. Latent Semantic Analysis for identification hidden semantic relations between Documents 		
Work placement	Not applicable		