

Subject card

Subject name and code	Big Data in Business, PG_00156669						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2025/2026		
Education level	Master's 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	part-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		3.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Department of Business Informatics -> Faculty of Management -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Jacek Maślankowski				
	Teachers		dr Jacek Maślankowski				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	9.0	0.0	9.0	0.0	0.0	18
	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	18		15.0		45.0	78
Subject objectives	To familiarize students with a comprehensive approach to acquiring and processing Big Data.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[liEMU2_U02] The student is able to proficiently acquire detailed information about economic processes and phenomena through direct observation, planned experimentation or database queries, as well as collect and process it using modern information technology tools.	designs web scraping scripts, creates NoSQL queries.	[SU4] test/exam - oral or written
	[liEMU2_K01] The student understands the need for continuous completion and deepening of acquired knowledge. The student inspires and organizes others' learning processes.	adheres to the principles of teamwork in the process of implementing systems, adheres to the principles related to data quality, willingly takes on challenges related to changing user requirements.	[SK4] test/exam - oral or written
	[liEMU2_W05] The student has an in-depth knowledge of socio-economic data sources, their databases and how to create them.	understands the purpose of creating and using Big Data systems, critically evaluates Big Data solutions.	[SW4] test/exam - oral or written
	[liEMU2_U04] The student is able to plan, design, and program information systems at an advanced level, supporting the operation of business entities.	designs web scraping scripts, creates NoSQL queries.	[SU4] test/exam - oral or written
	[liEMU2_W04] The student has an in-depth knowledge of advanced mathematical, statistical, econometric and IT methods that enable the acquisition, processing and analysis of data reflecting the functioning and growth of the national economy and its components, as well as the phenomena and processes occurring in their environment.	understands the purpose of creating and using Big Data systems, critically evaluates Big Data solutions.	[SW4] test/exam - oral or written
	[liEMU2_K02] The student can communicate freely with the public on specialised topics in the field of computer science and econometrics in and outside the workplace, communicate his knowledge and share his skills through various media. Culturally participates in discussions, is not afraid to ask questions and knows how to give constructive criticism.	adheres to the principles of teamwork in the process of implementing systems, adheres to the principles related to data quality, willingly takes on challenges related to changing user requirements.	[SK4] test/exam - oral or written
Subject contents	Introduction to Big DataNoSQL databases - collections and documents - creating, saving and retrieving dataA review of Big Data analytical tools, libraries supporting data processingWeb scraping techniquesPractical application of Data Mining, Text Mining, Web MiningSupervised and unsupervised machine learning		
Prerequisites and co-requisites	Knowledge of the basics of database design		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Exam - test	51.0%	100.0%

Recommended reading	Basic literature	Deitel P., Deitel H., Python dla programistów. Big Data i AI. Studia przypadków, Helion, 2020 Mayer-Schonberger, V., Cukier, K., (2013) Big Data: A Revolution That Will Transform How We Live, Work, and Think, Eamon Dolan/Houghton Mifflin Harcourt
	Supplementary literature	Glass, R., Callahan, S., (2015) The Big Data-Driven Business: How to Use Big Data to Win Customers, Beat Competitors, and Boost Profits, John Wiley & Sons
	eResources addresses	
Example issues/ example questions/ tasks being completed	List the Machine Learning MethodsWhat are the types of Big Data	
Work placement	Not applicable	

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