

Subject card

Subject name and code	Business Outcomes of Big Data Analysis , PG_00163314						
Field of study	Finance and Accounting, Information Science and Econometrics, Management, , Sport Management						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2024/2025		
Education level	undergraduate studies		Subject group		Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		English		
Semester of study	3		ECTS credits		2.0		
Learning profile	academic		Assessment form				
Conducting unit	Katedra Informatyki Ekonomicznej -> Faculty of Management -> Rektor						
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	15.0	0.0	0.0	0.0	0.0	15
	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	15		10.0		25.0	50
Subject objectives	familiarizing students with a comprehensive approach to processing large data sets,preparing students to use Big Data systems,preparing students to write Python scripts.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[ZARZL3_U07] The student is able to search for information necessary in making rational decisions of an operational and strategic nature in enterprises.	Designs algorithms for acquiring and processing Big Data data	[SU2] presentation/project/paper/report
	[ZISZL3_W05] He/she has advanced knowledge of the environment of health care units and the changes taking place in them, as well as the relation, significance and impact of the environment and stakeholders on the functioning of health care units. He/she knows the basic methods of diagnosing the macro- and micro-environment of health care units.	Filters information from the web to find data related to a specific subject area, such as healthcare.	[SW2] presentation/project/paper/report
	[ZSSML3_U07] The student is able to find the necessary information to make rational decisions of an operational and strategic in enterprises operating in the sports market and in other sports entities.	The student is able to automate operations related to searching for information necessary to achieve a specific business goal.	[SU2] presentation/project/paper/report
	[IiEL3_W05] The student has advanced knowledge of the sources of socio-economic data, their databases and ways of creating them.	The student is able to indicate databases from which information is acquired and evaluate the quality of these databases.	[SW2] presentation/project/paper/report
	[FiRL3_W06] The student has advanced knowledge of methods and tools, including data acquisition and analysis techniques, appropriate to management science and quality, which allow describing economic structures and institutions and the processes within and between them.	Student proposes a data processing and analysis model adapted to the defined requirements.	[SW2] presentation/project/paper/report
	[ZARZL3_W11] The student knows and understands the principles of obtaining and using different types of resources in achieving the development goals of the enterprise.	Student proposes a data processing and analysis model adapted to the defined requirements.	[SW2] presentation/project/paper/report
	[ZSSML3_W13] The student knows advanced methods, techniques of management analysis to support the process of economic decision-making, as well as sources of data and information from various fields of social sciences.	Student proposes a data processing and analysis model adapted to the defined requirements.	[SW2] presentation/project/paper/report
	[FiRL3_U02] The student can acquire data from various sources to analyze specific economic processes and phenomena related to finance. Is able to use information technologies.	The student is able to indicate databases from which information is acquired and evaluate the quality of these databases.	[SU2] presentation/project/paper/report
	[ZARZL3_K01] The student is aware of the depreciation of knowledge over time and understands the need for lifelong learning and deepening of knowledge in both academic and non-academic modes.	Deepens knowledge about the availability of various data sources, including open data and web data.	[SK2] presentation/project/paper/report
	[FiRL3_K01] Self-development: - understands the need for development and lifelong learning - is able to supplement and improve the acquired knowledge and skills - knows his strengths and weaknesses, sets ambitious goals to the best of his ability - knows how to accept failure and admit mistakes.	Student deepens knowledge about the availability of various data sources, including open data and web data.	[SK2] presentation/project/paper/report

	Course outcome	Subject outcome	Method of verification
	[liEL3_U04] The student can plan, design and program information systems to support the functioning of economic entities.	Designs algorithms for acquiring and processing Big Data data	[SU2] presentation/project/paper/report
	[ZISZL3_K01] Student is able to critically analyse the received content, with particular emphasis on social and economic sciences.	The student critically evaluates available data sources, indicating the best quality data sets.	[SK2] presentation/project/paper/report
	[ZISZL3_U07] Student is able to search for the necessary information in making rational operational and strategic decisions in medical entities.	Designs algorithms for acquiring and processing Big Data data	[SU2] presentation/project/paper/report
	[ZSSML3_K01] The student is aware of the depreciation of knowledge over time and understands the need for lifelong learning and deepening of knowledge in both academic and non-academic modes.	Deepens knowledge about the availability of various data sources, including open data and web data.	[SK2] presentation/project/paper/report
	[liEL3_K01] The student understands the need to constantly supplement and deepen acquired knowledge; is open to new ideas and teaching methods.	Student deepens knowledge about the availability of various data sources, including open data and web data.	[SK2] presentation/project/paper/report
Subject contents	1. Overview of Big Data Analytics (goals, methods, types of analysis, classifications) 2. Types of data in Big Data Analytics (machine generated data, human generated data, business mediated data) 3. Internet Marketing finding value in data and the quality of Big Data (hyperdimensions and attributes) 4. Data Mining, Text Mining, Web Mining and Machine Learning Tools 5. Big Data ecosystem (tools and software for analysis) 6. Practical aspects of Big Data implementation - MapReduce algorithms, regular expressions 7. Case studies		
Prerequisites and co-requisites	Knowledge of database issues		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Final project	51.0%	100.0%
Recommended reading	Basic 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 Python language course: http://python.org	
	Supplementary literature	Mayer-Schonberger, V., Cukier, K., (2013) Big Data: A Revolution That Will Transform How We Live, Work, and Think, Eamon Dolan/Houghton Mifflin Harcourt Apache Hadoop Ecosystem: http://hadoop.apache.org	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Designing and conducting a Big Data pilot study.		
Work placement	Not applicable		

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