



Subject card

Subject name and code	BUSINESS DATA ANALYTICS, PG_00061351						
Field of study	Management						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2026/2027		
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	3		Language of instruction		English		
Semester of study	5		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department Of Statistics And Econometrics -> Faculty Of Management And Economics -> Wydział Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Marta Kuc-Czarnecka				
	Teachers						
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		8.0		47.0	100
Subject objectives	Formulates research problems correctly and solves them using appropriate analytical methods and properly selected data						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W03] identifies reliable sources of information relevant to the analyzed issues		defines correctly the components of the studied phenomenon, obtaining reliable data needed for its advanced analysis and evaluation		[SW1] Assessment of factual knowledge		
	[K6_U07] uses information technology to improve data analysis and decision-making processes		analyzes the obtained data using appropriately selected methods, supporting the research process with information technologies		[SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents	The role of data analytics in modern organisations Trends and challenges in business data analytics Data collection methods and techniques. Data quality and integrity Bias in data analysis Data preprocessing and cleaning Data summarisation and aggregation Hypothesis testing Classification and regression algorithms Basics of time series analysis Introduction to forecasting techniques Basics of simulation and scenario analysis Best practices in data visualisation Storytelling with data Industry-specific applications of business data analytics (healthcare, finance, retail, etc.) Emerging trends and challenges in business data analytics						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Theoretical quiz		60.0%		40.0%		
	Data analytics project		60.0%		40.0%		
	Final project presentation and report		60.0%		20.0%		

Recommended reading	Basic literature	Regi, M. (2020). Business Analytics for Decision Making Maheshwari, A. (2014). Data Analytics Made Accessible: 2023 edition Knaflig, C. N. (2019). Storytelling with Data: Let's Practice!
	Supplementary literature	Provost F., & Fawcett, T. (2013). Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking Zumel, N. (2014). Practical Data Science with R
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	For a given dataset from a business, identify and handle missing values, correct errors, remove duplicates, and transform data into a suitable format Build and interpret regression models for business applications (for example: predict sales based on advertising spend; identify the factors that contribute to customer satisfaction) Use clustering techniques to identify patterns or segments in customer data Create visualizations and reports to communicate findings to business stakeholders	
Work placement	Not applicable	

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