



Subject card

Subject name and code	BUSINESS INTELLIGENCE, PG_00071719						
Field of study	Management						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2027/2028		
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	2	Language of instruction			English		
Semester of study	4	ECTS credits			4.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Informatics In Management -> Faculty of Management and Economics -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Anna Trzaskowska					
	Teachers						
Lesson types	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		3.0		52.0	100
Subject objectives	preparing students to use Business Intelligence technologies in solving decision-making problems, based on knowledge of analytical methods, data mining and IT tools, and shaping attitudes related to the responsible and critical use of data in the context of decision-making in organizations.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W05] possesses advanced knowledge in integrating data from various sources and in the methods that enable a comprehensive analysis of contemporary management issues.		knows and understands Business Intelligence methods and tools that enable the integration of data from various sources and their use in analysing economic problems		[SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects		
	[K6_U07] uses advanced information technologies to enhance data analysis and management processes.		can independently and collaboratively apply information technologies, such as Power BI and Power Query, to analyse data and enhance decision-making processes in organisations		[SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task		

Subject contents	Course content – lecture 1. BI History and Evolution 2. BI Processes and Architecture 3. BI Resources 4. BI Data Sources 5. BI Master Data 6. BI Frames of Reference and Decision Models 7. BI Tools - Market Overview 8. Reporting and Dashboards 9. BI Data Visualization 10. BI Storytelling and Narrative 11. Data Governance and Compliance 12. BI Trends and Future 13. DAMA DMBOK 14. Business Intelligence - cases		
	Course content – laboratory 1. Introduction to Power BI 2. Importing Data 3. Working with Data in Power Query 4. Creating Relationships 5. Creating New Columns and Measures 6. Creating and Formatting Visualizations 7. Aggregates 8. Interactions 9. DAX Functions 10. Creating a Calendar 11. Working with Geographic Data 12. Optimization and Prediction 13. Creating Dashboards 14. Using the Tool to Make Business Decisions 15. Storytelling		
Prerequisites and co-requisites	The basis of the computer science - knowledge of Excel at an intermediate level		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test of knowledge and understanding in the form of a quiz	60.0%	25.0%
	problem tasks	60.0%	75.0%
Recommended reading	Basic literature	1. Gartner, Inc. (2024). Magic quadrant for analytics and business intelligence platforms. https://www.gartner.com/en/documents/5519595 2. Provost, F., Fawcett, T., (2013) Data Science for Business. What You Need to Know about Data Mining and Data-Analytic Thinking, O'Reilly Media 3. Wexler, S., Shaffer, J., & Cotgreave, A. (2017). The big book of dashboards: Visualizing your data using real-world business scenarios. Wiley.	
	Supplementary literature	1. Own laboratory materials 2. Ferrari, A., & Russo, M. (2021). The definitive guide to DAX: Business intelligence with Microsoft Power BI, SQL Server Analysis Services, and Excel (2nd ed.). Microsoft Press. 3. Knaflic, C. N. (2015). Storytelling with data: A data visualization guide for business professionals. Wiley.	
	eResources addresses		
Example issues/ example questions/ tasks being completed	1. Which visualization will you choose to compare sales between regions and why? 2. How will you present sales trends over time in a way that's easy for management to understand? 3. What visualization will you use to detect outliers? 4. How will you design your dashboard to avoid information overload? 5. How will you change the visualization to better support decision-making?		
Practical activities within the subject	Not applicable		

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