University of Gdańsk

Subject card

Subject name and code	Modern Technologies in Business, PG_00155518		
Field of study	Management		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
Education level	postgraduate studies	Subject group	Obligatory subject group 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 English
Semester of study	4	ECTS credits	1.0
Learning profile	academic	Assessment form	
Conducting unit	Katedra Informatyki Ekonomicznej -> Faculty of Management		
Name and surname of lecturer (lecturers)	Subject supervisor	mgr Adam Ostrowski	
	Teachers		

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	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	2.0	8.0	25

Subject objectives

Teaching students:

- The market for applications for data analysis and visualization,
- Goals, principles and guidelines for business data visualization,
- With sample functionalities of business data analysis and visualization applications,
- Forms and principles of data visualization,
- With practical possibilities of using the Power BI tool to analyze and visualize business data.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[ZARZMU2_U05] The student can correctly select and apply advanced, complex methods and tools used in management and quality studies.	-Student knows how to correctly select and apply advanced business data visualization methods, -Student is able to analyze data using advanced forms of visualization business data (visual data exploration).	[SU2] presentation/project/paper/ report
[ZARZMU2_K02] The student is aware of the need to supplement and expand the acquired knowledge and skills and strives to combine knowledge from different fields and disciplines of science interdisciplinarily. The student can inspire others to learn.	-Student independently deepens knowledge and skills in the field of data analysis and visualization.	[SK2] presentation/project/paper/ report
[ZARZMU2_W13] The student has in-depth knowledge of advanced methods and techniques of managerial analysis, supporting the process of economic decision-making, and is familiar with the sources of obtaining data and information in the various fields of social sciences, especially management and quality studies.	-Student knows the market and functionality of applications used in data analysis and visualization.	[SW2] presentation/project/paper/ report
[ZARZMU2_U07] The student can search for detailed information to make rational and complex decisions of an operational and strategic nature in enterprises.	-Student is able to search for detailed information in the decision-making process using data analysis and visualization tools.	[SU2] presentation/project/paper/ report
[ZARZMU2_W11] The student knows and understands in an in-depth manner the principles of obtaining and using various types of resources in the implementation of the development objectives of the enterprise.	-Student knows the market of applications used in the analysis and visualization of business data.	[SW2] presentation/project/paper/ report
[ZARZMU2_K05] The student is ready to make an in-depth assessment of phenomena and justify his position through rational, logical and entrepreneurial use of knowledge - basing his assertions and decisions on an in-depth analysis of the information he receives.	-Student knows the basic forms of data visualization and the principles of their use.	[SK2] presentation/project/paper/ report
[ZARZMU2_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. The student is able to inspire and organize the learning process of others.	-Student independently deepens knowledge and skills in the field of data analysis and visualization.	[SK2] presentation/project/paper/ report

Subject contents

1. Basic goals of data visualization,
2. Basic forms of business data visualization,
3. Principles of business data visualization,
4. The market of IT tools for analyzing and visualizing business data,
5. Sample functionalities of Power BI tool in business data analysis and visualization.

Prerequisites and co-requisites

Basic computer skills and knowledge of MS Office (Excel).

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Final work - presentation of the project	51.0%	100.0%

Recommended reading

Basic literature	1. Wrycza S., Maślankowski J. (ed.). (2019). Informatyka ekonomiczna: Teoria i zastosowania. Wydawnictwo Naukowe PWN; 2. Annuncia S. M., Gohel H. A., Vairamuthu S., (2020), Data Visualization: Trends and Challenges Toward Multidisciplinary Perception, Springer;
Supplementary literature	Telea Alexandru, Data Visualization: Pronciples and Practise, Second Edition , Boca Raton, 2008
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	Presentation of functionality and examples of data presentation. Active cooperation with students on the use of Power BI applications in the visualization and analysis of business data. Examples of elements used in the Power BI application: downloading data, cleaning and treatment it, presenting it on Dashboards. Discussing the progress of work and presenting the Power BI functionality in relation to students' needs and questions.
Work placement	Not applicable

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