GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Interactive visualisation, PG_00045377		
Field of study	Data Engineering		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2024/2025
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	4	Language of instruction	Polish
Semester of study	7	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Informatics in Management -> Faculty of Management and Economics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Igor Garnik	
	Teachers	dr inż. Igor Garnik	

Lesson type and method of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	30.0	0.0	0.0	30

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	30	2.0	68.0	100

Subject objectives

The aim of the course is to acquire the skills needed to construct interactive visual communication in the visual business communication with the help of IT tools and solutions.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_K04] takes responsibility for jointly performed tasks.	Student understands the need of teamwork in developing solutions for information visualization.	[SK1] Assessment of group work skills
[K6_U13] Is able to prepare, independently and in a team, studies and analyses appropriate for the field of data engineering.		
[K6_W08] Knows the models and structure of the data mining process and their multidimensional analysis and can assess the results of such analyses		

<table>
<tr><td>Subject contents</td><td>Visualization in the diagnosis, assessment and analysis of phenomena.

Application of computer graphics to information visualization.

Visualization techniques for decision support. Methods: sheet-based, simulation and rule-based.

Visualization techniques for knowledge discovery.

Interactive techniques for accessing the data. Dynamic presentation of the data - selected applications.

Visualization of the spatial - geographic information – GIS systems.

Information architecture and its applications. Strategies for searching and filtering information.

Advanced visualization techniques in selected economic and scientific-technical applications.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Completion of the course: Visualization of economic data</td></tr>
<tr><td>Assessment methods and criteria</td><td><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>written test</td><td>60.0%</td><td>50.0%</td></tr>
<tr><td>laboratory exercises</td><td>60.0%</td><td>50.0%</td></tr>
</table></td></tr>
<tr><td>Recommended reading</td><td><table>
<tr><td>Basic literature</td><td>Murray S.: Interaktywna wizualizacja danych. Wyd. Helion Warszawa 2013.

Rosenfeld L., Morville P.: Architektura informacji w serwisach internetowych. Wyd. Helion Warszawa 2003.</td></tr>
<tr><td>Supplementary literature</td><td>Dudycz H.: Wizualizacja danych jako narzędzie wspomagania zarządzania przedsiębiorstwem. Wyd. Akademii Ekonomicznej we Wrocławiu, Wrocław 1998.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>- principles of construction of interactive charts for presentation on the Web

- RIA applications and their use in data visualization

- visualization of spatial and geographical data - construction and application</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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