University of Gdańsk

Subject card

Subject name and code	From Theory to Execution - Data Science in Business, PG_00178717						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
Mode of study	part-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		4.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Sabina Nowak				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	8.0	8.0	8.0	0.0	0.0	24
	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	24		1.0		75.0	100
Subject objectives	The course aims to present a comprehensive approach to issues related to the use of data and artificial intelligence in project management. It prepares students for the practical management of data-driven projects, from analysis and planning through implementation to project preparation and defense.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[IiEMU2_U10] The student is able to convey information transparently and effectively, adapting their communication to meet the needs of different audiences. They can clearly present their opinions and engage in debates using terminology from the fields of econometrics, informatics, or statistics, utilizing various media.	The student formulates opinions, discusses selected aspects, and presents solutions in the data management process of project management.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
[IiEMU2_K01] The student is ready to acquire and deepen the knowledge needed to solve cognitive and practical problems, in particular in the field of econometrics, informatics or statistics, as well as to evaluate the knowledge and the received content critically and to consult experts in the event of difficulties with solving the problem on their own.	The student is ready to deepen their knowledge of data analysis and machine learning in a business context.	[SK2] presentation/project/paper/ report [SK5] implementation of a problem task
[IiEMU2_U06] Students can utilize structured and detailed knowledge of management, quality sciences, economics, and finance to address dilemmas and develop innovative solutions for complex or unusual problems that arise in professional settings.	The student can manage a project using management, quality sciences, economics, and finance knowledge.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task
[IiEMU2_W03] The student possesses a thorough understanding of how organizations operate, including the complex phenomena, processes, and relationships that exist in their environments and how these impact their functioning.	The student identifies the data management process as a strategic resource of the organization.	[SW2] presentation/project/paper/ report [SW5] implementation of a problem task
[IiEMU2_W09] The student possesses a comprehensive understanding of both traditional and modern entrepreneurship principles.	The student analyzes issues in modern entrepreneurship related to data management, AI/ML implementation, organizational transformation, and process optimization.	[SW2] presentation/project/paper/ report [SW5] implementation of a problem task
[IiEMU2_U11] The student can collaborate effectively in teams and assume leadership roles.	The student engages actively in a team for a project that applies data and artificial intelligence in business.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task

Subject contents

1. Introduction to project management.
2. Project management within the field of machine learning.
3. Machine learning and data-driven projects in organizations.
4. Case study analysis of real business cases in artificial intelligence and data-driven fields.

Prerequisites and co-requisites

Students should have knowledge of business data analysis.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Team project with presentation	51.0%	100.0%

Recommended reading

Basic literature

1. K. Bainey, AI-Driven Project Management: Harnessing the Power of Artificial Intelligence and ChatGPT to Achieve Peak Productivity and Success, Wiley, 2024.
2. P.F. Schindler, The AI Revolution in Project ManagementUnlocking Success Secrets with AI. DE, tredition, 2024.
3. P. Taylor, AI and the Project Manager. How the Rise of Artificial Intelligence Will Change Your World, Taylor&Francis, 2021.
4. K. Łukasik-Stachowiak, THE USE OF ARTIFICIAL INTELLIGENCE IN PROJECT MANAGEMENT, SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY, ORGANIZATION AND MANAGEMENT SERIES NO. 217, pp. 281-299.

Supplementary literature

1. P. Grzywacz, M. Rzeczkowska, Sztuczna inteligencja. Wybrane aspekty zarządzania projektami AI&Data, Beck, 2025.
2. A.M. Felicetti, A. Cimino, A. Mazzoleni, S. Ammirato, Artificial intelligence and project management: An empirical investigation on the appropriation of generative Chatbots by project managers, Journal of Innovation & Knowledge, Volume 9, Issue 3, 2024, 100545, https://doi.org/10.1016/j.jik.2024.100545.

eResources addresses

Example issues/ example questions/ tasks being completed	
Work placement	Not applicable

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