University of Gdańsk

Subject card

Subject name and code	From Theory to Execution - Data Science in Business, PG_00177499						
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	full-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	Department of Econometrics -> Faculty of Management -> Rector						
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	15.0	15.0	15.0	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	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_U06] 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_K01] 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_U11] Can collaborate effectively in teams and assume leadership roles	The student is able to actively engage with a team on a project that applies data and artificial intelligence to business.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task
[IiEMU2_W03] 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 knows and understands the data management process as a strategic resource of the organization.	[SW2] presentation/project/paper/ report [SW5] implementation of a problem task
[IiEMU2_U10] 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 is able to formulate opinions, discuss selected aspects, and present solutions in the data management process of project management.	[SU2] presentation/project/paper/ report
[IiEMU2_W04] Possesses a comprehensive understanding of the complex nature of human roles and behaviors in organizations or projects, both at the individual and group levels	The student knows and understands the role of people in data science projects carried out within organizations, including the importance of interdisciplinary collaboration, communication, and stakeholder management, as well as the impact of organizational factors on the effective execution and implementation of analytical solutions.	[SW2] presentation/project/paper/ report
[IiEMU2_W09] Possesses a comprehensive understanding of both traditional and modern entrepreneurship principles	The student knows and understands issues in modern entrepreneurship related to data management, AI/ML implementation, organisational transformation, and process optimisation.	[SW2] presentation/project/paper/ report [SW5] 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	K. Bainey, AI-Driven Project Management: Harnessing the Power of Artificial Intelligence and ChatGPT to Achieve Peak Productivity and Success, Wiley, 2024. P.F. Schindler, The AI Revolution in Project ManagementUnlocking Success Secrets with AI. DE, tredition, 2024. P. Taylor, AI and the Project Manager. How the Rise of Artificial Intelligence Will Change Your World, Taylor&Francis, 2021. 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, http://dx.doi.org/10.29119/1641-3466.2025.217.17
	Supplementary literature	P. Grzywacz, M. Rzeczkowska, Sztuczna inteligencja. Wybrane aspekty zarządzania projektami AI&Data, Beck, 2025. 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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