University of Gdańsk

Subject card

Subject name and code	Data Warehouses in Management, PG_00199380		
Field of study	Economics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
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	1	Language of instruction	Polish
Semester of study	2	ECTS credits	4.0
Learning profile	academic	Assessment form	credit
Conducting unit	Division of Electronic Economy -> Department of Maritime Transport and Seaborne Trade -> Faculty of Economics -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Jacek Winiarski	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	15.0	0.0	30.0	0.0	60

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	60	0.0	40.0	100

Subject objectives

The aim of the lectures is to familiarize students with the key aspects of creating, managing and using data warehouses in enterprise management. Students will gain knowledge about data warehouse architecture, ETL processes (Extract, Transform, Load), data security and analysis and reporting methods. Lectures will also cover the latest technologies and trends related to data warehouses.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[EKONMU2_W11] knows the detailed principles of establishing and developing forms of individual entrepreneurship, using the knowledge of economics, finance and management sciences	Knows detailed principles of creating and developing forms of individual entrepreneurship in the context of data warehouse management, using knowledge from economics, finance, and management sciences.	[SW4] test/exam - oral or written
[EKONMU2_K05] correctly identifies, diagnoses and solves advanced dilemmas and alternative solutions related to the profession	Correctly identifies, diagnoses, and resolves dilemmas and various solution options related to data warehouse management.	[SK4] test/exam - oral or written
[EKONMU2_U15] can independently expand and improve acquired knowledge and skills in economics; is open to new ideas and techniques; tends to learn using any accessible method and to interact with other participants of the learning process	Can independently supplement and improve knowledge and skills in data warehousing, is open to new technologies and techniques, and collaborates with others in the learning process.	[SU1] oral statement/conversation/ discussion
[EKONMU2_W07] has an in-depth knowledge of economic and financial principles governing the functioning and management of economic entities and organisations, as well as of systems of legal, organisational, professional, moral and ethical norms and rules organising public structures and institutions, both in the national and international spheres	Knows and understands basic concepts and the architecture of data warehouses, their main components, and functions. Understands the importance of data warehouses in the decision-making process.	[SW4] test/exam - oral or written
[EKONMU2_W08] has an in-depth knowledge of processes occurring in enterprises and economic organisations and with related areas, as well as of processes of change in public institutions; knows methods of research on the regularities governing these changes, taking into account the influence of external stakeholders on them	Has in-depth knowledge of the processes occurring in enterprises and economic organizations, including data warehouse management, as well as the processes of changes in public institutions. Knows methods of examining the principles governing these changes, considering the impact of external stakeholders.	[SW4] test/exam - oral or written
[EKONMU2_U14] can appropriately identify priorities and plan and organise tasks related to their implementation, as well as monitor and assess progress	Can appropriately set priorities, plan and organize tasks related to data warehousing, and monitor and evaluate progress in their implementation.	[SU8] observation of student's independent or team work
[EKONMU2_U13] can manage teamwork as well as interact and work in a team (including in an international environment) assuming a leading role in it	Can lead a team and cooperate and work in a team, including in an international environment, assuming a leading role.	[SU1] oral statement/conversation/ discussion
[EKONMU2_K04] is ready to think and act in an entrepreneurial manner; adapts to new situations and conditions; undertakes challenges of creative thinking; acquires resilience to failures; can assess risks and threats and find ways of counteracting their effects	Is ready to think and act entrepreneurially; adapts to new situations and conditions, takes on creative thinking challenges, develops resilience to failures, can assess risks and threats, and find ways to counteract their effects.	[SK1] oral statement/conversation/ discussion
[EKONMU2_W02] has an in-depth knowledge of various types of existing economic entities and organisations as well as an extended knowledge of public institutions	Has in-depth knowledge of various types of existing economic entities and organizations, and expanded knowledge of public institutions, in the context of data warehouse management.	[SW4] test/exam - oral or written

<table>
<tr><td>Subject contents</td><td>Week 1: Introduction to data warehousingWeek 2: Data warehouse architectureWeek 3: ETL Processes (Extract, Transform, Load)Week 4: Data warehouse securityWeek 5: Data analysis and reportingWeek 6: Artificial intelligence in data warehousesWeek 7: Data warehouse project management

In order to develop the concepts discussed during the lectures, students can take advantage of consultations.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>To participate in lectures on the subject, students should have basic computer skills. Knowledge of basic IT tools and the ability to effectively use the Internet and office applications are necessary to fully understand the material discussed during lectures.</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>Exam</td><td>51.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>Kimball, R., Ross, M., The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling, Wiley, Indianapolis, 2013.

Inmon, W. H., Building the Data Warehouse, Wiley, Hoboken, 2005.

Behrendt, M., Adamson, R., et al., Architecting the Cloud: Design Decisions for Cloud Computing Service Models (SaaS, PaaS, and IaaS), Wiley, Indianapolis, 2013.</td></tr><tr><td>Supplementary literature</td><td>Collier, K., Agile Analytics: A Value-Driven Approach to Business Intelligence and Data Warehousing, Addison-Wesley, 2012.

Kleppmann, M., Designing Data-Intensive Applications: The Big Ideas Behind Reliable, Scalable, and Maintainable Systems, OReilly Media, 2017.</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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