



## Subject card

Subject name and code	DATABASE DESIGN, PG_00061877						
Field of study	Engineering Management						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group		Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Part-time studies (on-line)		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department Of Informatics In Management -> Faculty Of Management And Economics -> Wydział Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Bartosz Woliński				
	Teachers		dr inż. Bartosz Woliński				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	8.0	0.0	16.0	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		7.0		69.0	100
Subject objectives	Designs and implements databases in accordance with theoretical and practical principles						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U07] applies information technology to improve critical analysis and evaluation of data and management processes		implements databases using appropriate models and IT techniques		[SU4] Assessment of ability to use methods and tools		
	[K6_W06] classifies the obtained information, evaluating its usefulness to solve the formulated problems		obtains information useful for designing databases according to specific requirements		[SW1] Assessment of factual knowledge		
Subject contents	Designing an information system The place of design in the life cycle of the system Design and modeling methodology Designing databases as elements of management information systems Requirements engineering Identification of system processes and functions (functional analysis) Logical process model Modeling the flow of information Data modeling Logical data model based on a case study Data model optimization Physical data model Interface modeling Design stages Use of CASE tools, database schema generation RDBMS MS SQL Server use to create databases Input and output design Advanced SQL (Structured Query Language) used to create, modify databases, and put data into and retrieve data from databases						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project	60.0%	60.0%
	Pass test	75.0%	10.0%
	Practical exercises	80.0%	30.0%
Recommended reading	Basic literature	Mendrala, D., Szeliga, M. (2008). Serwer SQL2005Express. Gliwice:Helion Mendrala, D., Szeliga, M. (2012). Microsoft SQL Server Modelowanie i eksploracja danych. Gliwice:Helion Johanson, E., Jones, J. (2009). Modelowanie danych w SQL Server 2005 I 2008. Gliwice:Helion Ben-Gan, I. (2012). Microsoft SQL Server 2012.Podstawy Języka T_SQL, APN Promise Petkovic ,D. (2012). Microsoft® SQL Server® 2012: A Beginners Guide. Fifth Edition McGraw-Hill	
	Supplementary literature	Yourdon, E. (1996). Współczesna analiza strukturalna, Warszawa; WNT	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Design a simple information system How are processes modeled and identified? How is the data modeled?		
Work placement	Not applicable		

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