

Subject card

Subject name and code	Structured Query Language - SQL, PG_00157242						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2024/2025		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study		
Mode of study	part-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		3.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Statistics -> Faculty of Management -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Tomasz Jurkiewicz				
	Teachers		dr Tomasz Jurkiewicz				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	16.0	0.0	0.0	16
	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	16		15.0		45.0	76
Subject objectives	Students' familiarity and understanding of the basic notions and concepts of database systems technology, the principles of database modelling and design and the SQL language.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[liEMU2_K03] The student is able to communicate freely with the public inside and outside the workplace, transfer his knowledge and share his skills through various media.	Able to communicate freely with the public, communicate his/her knowledge and share his/her SQL skills.	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report [SK3] text preparation/written work [SK5] implementation of a problem task
	[liEMU2_U02] The student is able to proficiently acquire detailed information about economic processes and phenomena through direct observation, planned experimentation or database queries, as well as collect and process it using modern information technology tools.	Able to efficiently retrieve detailed information through relational database queries and to collect and process this information using modern IT tools.	[SU2] presentation/project/paper/report [SU3] text preparation/written work [SU5] implementation of a problem task
	[liEMU2_K02] The student can communicate freely with the public on specialised topics in the field of computer science and econometrics in and outside the workplace, communicate his knowledge and share his skills through various media. Culturally participates in discussions, is not afraid to ask questions and knows how to give constructive criticism.	Able to communicate freely, culturally and assertively with the public on specialised IT topics, communicate their knowledge and share their SQL skills.	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report [SK3] text preparation/written work [SK5] implementation of a problem task
	[liEMU2_K01] The student understands the need for continuous completion and deepening of acquired knowledge. The student inspires and organizes others' learning processes.	Understands the need to continuously complement and deepen the acquired knowledge of relational databases and query development.	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report [SK5] implementation of a problem task
	[liEMU2_W04] The student has an in-depth knowledge of advanced mathematical, statistical, econometric and IT methods that enable the acquisition, processing and analysis of data reflecting the functioning and growth of the national economy and its components, as well as the phenomena and processes occurring in their environment.	Has an in-depth knowledge of advanced IT methods for data acquisition, processing and analysis.	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report [SW3] text preparation/written work [SW5] implementation of a problem task
Subject contents	Functional diagram of databases, features of database technology, specifics of the SQL query language. SQL command groups, general command syntax, data retrieval, query result ordering. Basic functions operating on single rows (character, numeric and date functions), functions calculating aggregates. Joining tables, ordinary and correlated subqueries. Inserting, modifying and deleting data from tables. Data analysis using statistical packages.		
Prerequisites and co-requisites	Knowledge of general computer principles and database software.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Written test	51.0%	100.0%
Recommended reading	Basic literature	Itzik Ben-Gan Podstawy języka T-SQL: Microsoft SQL Server 2022 Thomas Connolly, Carolyn Begg, Systemy baz danych: praktyczne metody projektowania, implementacji i zarządzania, Wydawnictwo RM	

	Supplementary literature	Itzik Ben-Gan Zapytanie w języku T-SQL w Microsoft SQL Server 2014 i SQL Server 2012 Wiloetta Matosek, Język SQL w bazie danych Oracle 10g, Wydawnictwo Uniwersytetu Gdańskiego Anthony Molinaro, SQL Cookbook, O'Reilly Alan Beaulieu, Learning SQL, O'Reilly
	eResources addresses	
Example issues/ example questions/ tasks being completed	Display the amounts of interest on monthly cash loans at the current interest rate and the interest rate increased by 5 percentage points for cash loans and 3 percentage points for car loans. Display the customers who will celebrate a round 5 birthday in the third quarter of this year (turning 25, 30, 35, ...) years old from the youngest to the oldest. Display the number of clients, their average income, the standard deviation of income for each city where the clients worked. Give the id of the client (with their name) who earns closest to and furthest from the average among all employees in their industry.	
Work placement	Not applicable	

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