

Course title: Databases

ECTS credit allocation (and other scores): 5.5

Semester: autumn

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Engineering and technology

Language: English/Polish

Number of hours per semester: 75

Course coordinator/ Department and e-mail: Paweł Drozda, pdrozda@matman.uwm.edu.pl

Type of classes: classes and lectures

Substantive content

CLASSES: MySQL, SQL, joining tables, aggregate functions, MySQL built-in functions, SQL Subqueries, SQL Granting and revoking privileges, Transaction management, creating simple functions, procedures and triggers, creating indexes

LECTURES: introduction to databases, Basic concepts, Database environment, Entity relationship diagram, Relational data model, SQL database language, defining data, Query language, SQL Access control, Database security, Database transactions, Transaction management, Indexes

Learning purpose: The aim of the course is to acquaint students with the basic concepts and technology concepts of database systems. students will learn the basic principles of modeling and database design, relational data model, the standard SQL language

On completion of the study programme the graduate will gain:

Knowledge: understand the meaning of queries, transactions and indexes in the databases

Skills: the student can use the entity-relationship model for database design, can use SQL to create, modify and manage databases

Social Competencies: Student can formulate questions about the goals and is able to find the necessary information in the literature and in the Internet

Basic literature: Documentation MySQL 8.0, Documentation Oracle, Hector Garcia-Molina, Jeffrey D. Ullman, Jennifer Widom, Database Systems, Helion, 2011 Elmasri Ramez, Navathe Shamkant B., Introduction to Databases, Helion, 2019

Supplementary literature: Introduction to Databases, Stanford, on-line course

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 80

Student's independent work: 57.5