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| **Level**: bachelor | | |
| **Course title:** Databases 1 (code: I031) | | |
| **Course status:** mandatory | | |
| **ECTS:** 7 | | |
| **Requirements:** None | | |
| **Learning objective:**<br>Educating student for modelling, creating and using (SQL queries) relation data model, as well as mastering principles of operating DBMS. | | |
| **Learning outcome:**<br>*Expected:* At the end of the course, students will be able to create relation data model for an illustrated example of a real system using appropriate CASE tool; based on that model students should be able to create database and to demonstrate few examples of SQL query.<br>*Desired:* At the end of the course, successful students should be able to understand basic principles of modelling and creating relation data model for an illustrative example of real system using appropriate CASE tool, execution of SQL queries and functions of DBMS. | | |
| **Syllabus**<br>*Theoretical part:*<br>Basic terms and principles. Concept of databases. Basic data models. Entity-relation model and its connection with object data model. Relation data model. SQL - query language for manipulating data. Translation of ER model into relation data model. Separation of logical and physical data structure. Functions of database system management.<br>*Practical part:*<br>Creating ER model for illustrative examples of systems using appropriate CASE tool. Creating relation data model by translating ER model using appropriate CASE tool. Managing data using illustrative SQL queries. | | |
| **Weekly teaching load** | | |
| **Total hours** | **Lectures:** 2 | **Practice:** 3 |