

<b>Course Title:</b>	<b>Database Implementation in RDBMS</b>
<b>Institute/Division:</b>	Department of Automation and Computer Engineering Faculty of Electrical and Computer Engineering
<b>Course code:</b>	<b>E-DBI</b>
<b>Erasmus subject code:</b>	0612 Database and network design and administration
<b>Number of contact hours:</b>	45
<b>Course duration:</b>	1 semester (Spring/Summer)
<b>ECTS credits:</b>	6
<b>Course description:</b>	<p>This course is about the implementation of databases, primary and secondary database objects in Relational Database Management Systems. In addition, the course includes programming in databases as well as optimization of database operations. The environments used during the course are Oracle Database Server, the most popular and most advanced commercial database system, as well as PostgreSQL, the most popular and most advanced open-source database system.</p> <p>The course covers:</p> <ul style="list-style-type: none"><li>• Database structures: tables, views, indexes, sequences</li><li>• Using of SQL language in Oracle Database and PostgreSQL Server</li><li>• Programming Languages PL/SQL: blocks, procedures, functions, triggers, packages and PL/pgSQL structures</li><li>• SQL operations optimization: analysis, execution plans, statistics, cost based optimizer</li></ul>
<b>Course type:</b>	Lectures (20h), Computer laboratory (20h), Project (5h)
<b>Literature:</b>	Jason Price – Oracle Database 12c SQL, McGraw Hill, 2013 Steven Feuerstein and Bill Pribyl – Oracle PL/SQL Programming, 2014 Michael McLaughlin – Oracle Database 12c PL/SQL Programming, 2014 Luca Ferrari, Enrico Pirozzi – Learn PostgreSQL. Use, manage, and build secure and scalable databases with PostgreSQL 16 - Second Edition, 2023 Alice Zhao - SQL Pocket Guide: A Guide to SQL Usage, 2021.
<b>Assessment method:</b>	Project and laboratory exercises
<b>Prerequisites:</b>	-
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