

<b>Database</b>					
<b>Course Code</b> CIF61009	<b>Student Workload</b> 120 hours	<b>Credits</b> (according to ECTS) 6	<b>Semester</b> Semester 3	<b>Frequency</b> each even-semester	<b>Duration</b> 16 meetings
<b>1</b>	<b>Types of courses</b> <i>Compulsary</i> (Faculty level )	<b>contact hours</b> 67,5 hours	<b>independent study</b> 52,5 hours	<b>class size</b> 40 students	
<b>2</b>	<b>Prerequisites for participation</b> Have completed Algorithm and data structure course				
<b>3</b>	<b>Learning outcomes</b> <ul style="list-style-type: none"> <li>● IF-ILO-2 Graduates have the ability to be scientific, work collaboratively, have a professional attitude, and have good adaptation skills when working in groups or as an individual</li> <li>● IF-ILO-3 Graduates are able to develop professional careers in the field of computer science based on quality aspects, data-based decision making, be responsible, and make continuous improvements.</li> <li>● IF-ILO-7 Mastering the theoretical concept and principles of computer science, especially in the aspect of algorithms, programming, intelligent systems, information management, parallel and distributed computing, information security, human-computer interaction, software engineering, and fundamentals of computer systems and networks.</li> <li>● IF-ILO-12 Graduates are able to apply the principles of engineering to develop good quality software on top of various platforms.</li> <li>● IF-ILO-13 Graduates are able to perform abstraction, modeling, representation, and data acquisition in order to perform the data analysis</li> </ul>				
<b>4</b>	<b>Subject aims</b> <ul style="list-style-type: none"> <li>● Students are able to understand the concept and evolution of databases.</li> <li>● Students are able to identify entities, attributes, and relation.</li> <li>● Students are able to identify relationships between entities (relation) and cardinality.</li> <li>● Students are able to apply entity mapping stages.</li> <li>● Students are able to implement entity design and mapping.</li> <li>● Students are able to identify the normalization of forms to one.</li> <li>● Students are able to understand selection representation, projection, joint in relational algebra.</li> <li>● Students are able to apply DDL syntax in SQL form.</li> </ul>				

	<ul style="list-style-type: none"> <li>● Students are able to apply DML syntax in SQL form.</li> <li>● Students are able to apply transactions in databases in SQL form</li> <li>● Students are able to apply the basics of SQL programming.</li> <li>● Students are able to understand the concept and introduction of NoSQL.</li> </ul>
<b>5</b>	<b>Teaching methods</b> lectures, case study, class discussion, presentation
<b>6</b>	<b>Assessment methods</b> assignment, mid-term examination, end-term examination, project evaluation, practical-skill assessment
<b>7</b>	<b>This module is used in the following degree programs as well</b> Information Engineering
<b>8</b>	<b>Responsibility for module</b>
<b>9</b>	<b>Other information</b> 1. Elmasri R, Navathe SB (2016) The Relational Data Model and Relational Database Constraints 2. Silberschatz, Korth, Sudarshan. 2019. “ <i>Database System Concepts 7th Edition</i> ”. McGraw–Hill..