

Database Administration

Course Title: Database Administration					
Course Code: CIT610 20	Student Workload: 11 Hours / Weeks	Credits: 4 Credits (6 ECTS)	Semester: 5 th Semester	Frequency: Odd Semester	Duration: 16 Weeks/ Semester (<i>Lecture:</i> 14 weeks; <i>Midterm assessment</i> : 1 week; <i>Final assessment</i> : 1 week)
1	Types of Courses: Knowledge Course	Contact Hours: <i>Lecturing:</i> 2.50 Hours/ Week; <i>Practical Work:</i> 2.83 Hours/ Week	Independent Study: <i>Self-study:</i> 4.00 Hours/ Week; <i>Structured Assignment:</i> 4.00 Hours/ Week	Class Size: 40 Students	
2	Prerequisites for Participation (If Applicable): -				
3	Learning Outcomes: <ol style="list-style-type: none"> M1: Able to identify, formulate and analyze the problem of information system requirements of an organization in the context of providing database servers. M2: Able to identify, formulate and analyze database server performance problems in complex data transaction environments, maintain performance, availability, and security of data stored therein M3: Able to implement database server architecture and perform database governance through modules or commands already available in popular RDBMS tools. M4: Able to demonstrate understanding and application of database server architecture which includes requirements planning, performance monitoring, and handling, data security, and mitigating access availability from potential system failures. M5: Able to demonstrated ability to set up database server architecture through scenarios of handling key server issues using popular RDBMS tools. 				
4	Subject aims/Content: At the end of the course, students are expected: <ol style="list-style-type: none"> L1: Able to understand the duties and roles of database administrators and the system environment of popularly used RDBMS tools. L2: Able to identify and formulate database server architecture requirements. L3: Able to perform requirements analysis on database server planning and distinguish each database object's function. L4: Able to learn and understand the features of RDBMS as a database server to handle complex data transactions, maintain service performance, availability of access to data, and data security at the system level to data rows. L5: Able to identify and formulate server configurations that match the needs of information systems to handle complex data transactions, maintain service performance, availability of access to data, and data security at the system level to data lines. L6: Able to perform requirements analysis on database server planning and distinguish the appropriate database server configurations to handle complex data transactions, maintain service performance, availability of access to data, and data security. L7: Able to use SQL modules or syntax to configure database servers to suit an organization's data storage needs. L8: Able to use SQL modules or syntax to handle complex data transactions from many concurrent users (concurrent) L9: Able to use SQL modules or syntax to monitor and maintain database server performance in response to organizational data requests. L10: Able to use SQL modules or syntax to maintain administrative access to database servers from potential problems or system failures. 				

	<p>11. L11: Able to use SQL modules or syntax to maintain data securely stored in database servers through user authentication and authorization on database objects (tables) to the level of data rows (records).</p> <p>12. L12: Able to demonstrate database servers in handling complex data transactions based on data transaction scenarios that occur in information systems used by organizations.</p> <p>13. L13: Able to demonstrate the stages of installing, configuring, and implementing database servers to simulate database backup and recovery from potential system problems or failures.</p>
5	<p>Teaching Methods: Lecturing, Group Discussion, Case-Based Learning, Project-Based Learning</p>
6	<p>Assessment Methods: Essay, multiple-choice, product assessment, project assessment, anecdotal record/logbook</p>
7	<p>This Course is Used in The Following Study Programme/s as Well: -</p>
8	<p>Responsibility for Course: Welly Purnomo, ST., M.Kom</p>
9	<p>Other Information: Bibliography:</p> <ol style="list-style-type: none"> 1. Agarwal, K.K. and Mohanty, M. and Jamshed, A.(2019) 'Fundamental of Database Administration: Dba', Independently Published, ISBN 9781092885171. 2. Craig S. Mullins. (2002) 'Database Administration: The Complete Guide to Practices and Procedures', Addison-Wesley, ISBN 0201741296.