

Data Warehouse

Course Title: Data Warehouse					
Course Code: CIT610 21	Student Workload: 8,5 Hours / Weeks	Credits: 3 Credits (4,50 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> 0.00 Hours/ Week	Independent Study: <i>Self-study:</i> 3.00 Hours/ Week; <i>Structured Assignment:</i> 3.00 Hours/ Week	Class Size: 40 Students	
2	Prerequisites for Participation (If Applicable): Basic Database				
3	Learning Outcomes: <ol style="list-style-type: none"> M1: Able to explain the concept and understand a data warehouse's characteristics that focus on the stages of extraction, transformation, and load in fulfilling specific data analytics. M2: Able to identify an organization's problems and data analytic needs and develop stages of plans for project development. M3: Able to design logical and physical models for data warehouse and implement Extract, Transform, Load (ETL) process independently using data integration tools. M4: Able to demonstrated ability to develop data warehouse projects, operate data integration tools capable of fulfilling specific data queries and analytics. 				
4	Subject aims/Content: At the end of the course, students are expected: <ol style="list-style-type: none"> L1: Able to master theoretical concepts related to a data warehouse's definition, characteristics, components, and architecture. L2: Able to distinguish between OLTP and OLAP database concepts. L3: Able to master theoretical concepts related to the data extraction process, data transformation, and data loading in the data warehouse. L4: Able to design logical and physical models of the data warehouse. L5: Able to create a conceptual model of the ETL stage that will be carried out. L6: Able to plan data warehouse project development. L7: Able to apply physical models on a database server. L8: Able to use the ETL process with various data sources. L9: Able to apply queries to present OLAP data. L10: Able to demonstrate the ability to develop ETLs and operate them periodically to meet organizational-specific data analytics. L11: Able to demonstrate the ability to develop OLAP that provides visualization or reporting data specific to an organization. 				
5	Teaching Methods: Lecturing, Group Discussion, Case-Based Learning, Project-Based Learning				
6	Assessment Methods: Essay, multiple-choice, product assessment, project assessment, anecdotal record/logbook				
7	This Course is Used in The Following Study Programme/s as Well: -				
8	Responsibility for Course: Welly Purnomo, ST., M.Kom				

Other Information:

Bibliography:

1. Inmon, William H. 2005. Building the Data Warehouse. 4th Edition. Wiley Publishing, Inc.
2. Kimball, Ralph and Ross, Margy. 2013. The Data Warehouse Toolkit. 3rd Edition. John Wiley and Son, Inc.
3. Lane, Paul and Potineni, Padmaja. 2014. Oracle Database Data Warehousing Guide, 12c Release 1 (12.1). Oracle.
4. Ponniah, Paulraj. 2010. Data Warehousing Fundamentals For IT Professionals. 2nd Edition. John Wiley and Son, Inc.