MODULE HANDBOOK DESCRIPTION

Module designation	Database Laboratory	
Code	FBD3106	
Semester(s) in which the module is taught	5 / third year	
Person responsible for themodule	Lalu Ahmad Syamsul Irfan Akbar, ST.M.Eng	
Language	Indonesian	
Relation to curriculum	Elective for Computer Engineering	
Teaching methods	Case Study	
Workload (incl. contacthours, self-study hours)	Contact minutes every week, each week of the 16weeks/semester : • Practice : 1 x 50 minutes • Data analysis : 1 x 50 minutes • Writing report : 1 x 50 minutes. Total study hours = 2 hours 30 minutes/week	
Credit points	1 (~ 1.6 ECTS)	
Required and recommended prerequisites for joiningthe module	- Database (FBD3102)	
Module objectives/intend edlearning outcomes	1. Students can determine the entity and attributes needed to build a fiber database system to make a diagram to connect each of these entities in the form of an er diagram or eer diagaram	PLO3
	2. Students can create a database and tables on MySQL in accordance with the design that has been made on the R diagram or eer diagam, and apply relations and constraints on each table	PLO4
	3. Students can implement queries in 1 table and query from several tables using the WHERE and JOIN Classes, make indexes in the table and are able to apply Priveleges management to each user	PLO5

Content	1. ER Diagram 2. Enhanced ER Diagram 3. Installing and Configuring MySQL 4. SQL Basics: Introduction to Structured Query Language (SQL), including syntax, data types, and basic commands for creating tables and manipulating data. 5. Creating Databases and Tables: Creating databases and tables using SQL commands and managing table structures. 6. Adding, Modifying, and Removing Data: Inserting, updating, and deleting data from tables using SQL commands. 7. Querying Data: Retrieving and filtering data from tables using SELECT statements and the WHERE clause, as well as joining tables to obtain more complex data. 8. Indexing: Creating indexes for tables to improve query performance. 9. User and Access Management: Creating users and managing their permissions.
Examination forms	1. Pre-test 2. Practice skills 3. Practice report 4. Response
Study and examination requirements	The final grade in the module is composed of: a. Pre-test and practice skills = 20% b. Practice report and response = 80% Students must have a final grade of 65% or higher to pass
Reading list	1. Tahaghoghi, Seyed M.M. (Saied) and Williams, Hugh E, (2018), Learning MySQL: Get a Handle on Your Data, 2nd Edition. O'Reilly Media. 2. Schwartz, Baron, Zaitsev, Peter, Tkachenko, Vadim, and Axmark, David, (2012), High Performance MySQL: Optimization, Backups, and Replication, 3rd Edition. O'Reilly Media.