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|  | **UNIVERSITAS NEGERI PADANG****FACULTY OF ENGINEERING****ELECTRONICS DEPARTMENT****INFORMATICS EDUCATION STUDY PROGRAM** | **Document Code** |
| **STUDY LEARNING PLAN (SLP)** |
| **Course** | **Code** | **Course Group** | **Credit Points (CP)** | **Semester** | **Date of Creation** |
| **(Praktikum Basis Data)****Practicum of Database** | TIK2.61.3302 | Compulsory Courses of the Study Program | 2 CP (Practicum) | 3 (Third) | July 2017 |
| **AUTHORIZED** | **Course Lecturers** | **Course Coordinator** | **Head of Study Program** |
| **Yeka hendriyani, M.Kom****NIP. 19840520 201012 200 3** | **Thamrin, M.T.****NIP. 19770101 200812 100 1** | **Ahmaddul Hadi, S.Pd, M.Kom.****NIP. 19761209 200501 1 003** |
| **Learning Outcomes** | **Program Learning Outcomes (PLO)** |  |
| PLO – S1 | Devote to God Almighty, Pancasila minded, and aware of the interest of the nation. |
| PLO – S4 | Have responsibility, confidence, emotional maturity, ethics, and lifelong learner principle. |
| PLO – P15 | Understand the basic concepts of databases |
| PLO – KU5 | Able to apply the concept of database and able to design databases |
| PLO – KK15 | Able to master basic database programming languages |
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| **Course Outcomes (CO)** | After completing this course, students should: |
| CO1 | Able to understand the concept of database languages,  |
| CO2 | Able to identify programming language models |
| CO3 | Able to compare various database troubleshooting solutions |
| CO4 | Able to understand about database concepts and being able to build databases for computer-based system development |
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| **Course Description** | This course learns and masters the concepts and implements database application creation using one of the DBMS and database programming languages in order: designing tables, data entry in tables, creating forms (for data entry and for menu views), querying, report creation |
| **Course Materials** | 1. Aplikasi DBMS, MS Acces Mysql, PostgreSQL
2. Bahasa pemograman sql, DDL
3. DML (Data Manipulation Language)
4. Arithmetic Operator, Aggregate function, String function, Numeric function, Date/Time Function
5. Group by, group by with order, having
6. Aggregate Function
7. Database Relation
8. Database Relation Join
9. Union, Intersect, Except
10. View dan control flow function
11. Create Procedure
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| **Reading List** | **Main Books:** |  |
| 1. Modul Praktikum Sistem Basis Data: Tim Dosen Program Studi Informatika
2. C. J. Date. 2006. An Introduction to Database Systems 8th. Pearson Education
 |
| **Additional Books:** |  |
| 1. Churcher, C., 2007, Beginning Database Design: From Novice to Professional (ebook available)
2. Oppel, A. & Sheldon, R., 2009, SQL: A Beginner’s Guide
3. Taylor, A.G., 2011, SQL Essential-All in One for Dummies
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| **Learning Media** | **Software:** | **Hardware:** |
| Netbeans IDE, Powerpoint, Word APP | LCD & Projector |
| **Course Lectures** | Yeka Hendriyani, M.Kom. |
| **Recommended Prerequisites** | - |
| **Week** | **Sub-Course Outcomes****(Expected Final Ability in each Learning Stage)** | **Assessment Indicators** | **Criteria & Assessment Form** | **Learning Method & Assignment** **[Estimated time]** | **Learning Content & Course Materials [Reading List)** | **Score****(%)** |
| **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** |
| 1-2 | 1. DBMS Application
2. SQL Language
 | 1. Able to understand the basic concept of DBMS
2. Able to understand SQL language
 | **Form:**1. Quiz
2. Assignment
 | Database Management System & SQL1. **Lectures**

**[2x100 minutes]**1. **Structured activities**

**[2x140 minutes]**1. **Individual study**

**[2x140 minutes]** | 1. DBMS
2. MS Access
3. MySQL
4. PostgreSQL
5. Oracle
 | **15 %** |
| 3-7 | 1. DML
2. SQL
3. Arithmetic Operator
4. Aggregate Functions
 | 1. Able to describe basic SQL commands and SQL statement groups for database definition.
2. Able to use DML commands
3. Able to understand SQL Language for retrieving data and apply arithmetic
4. Able to understand, apply ERD in database
5. Able to understand and to apply Aggregate Functions
 | **Form:**1. Quiz
2. Assignment
 | SQL1. **Lectures**

**[2x100 minutes]**1. **Structured activities**

**[2x140 minutes]**1. **Individual study**

**[2x140 minutes]**Data Manipulation Language1. **Lectures**

**[2x100 minutes]**1. **Structured activities**

**[2x140 minutes]**1. **Individual study**

**[2x140 minutes]**Arithmetic Operators1. **Lectures**

**[1x100 minutes]**1. **Structured activities**

**[1x140 minutes]**1. **Individual study**

**[1x140 minutes]** | 1. SQL
2. DML
3. Arithmetic OperatorString Function, Numeric Function, Date/Time Function.
4. Aggregate Function
5. Group by with Order
 | **35 %** |
| **8** | **Mid Evaluation** |  |
| 9-10 | 1. Entity Relationship Diagram
2. Table Relation
 | 1. Able to replicate the table by using the Join command.
2. Able to stretch tables
 | **Form:**1. Quiz
2. Assignment
 | ERD1. **Lectures**

**[1x100 minutes]**1. **Structured activities**

**[1x140 minutes]**1. **Individual study**

**[1x140 minutes]**Table Relation1. **Lectures**

**[1x100 minutes]**1. **Structured activities**

**[1x140 minutes]**1. **Individual study**

**[1x140 minutes]** | 1. ERD
2. Table Relation
 | **15 %** |
| 11-13 | 1. Union
2. Intersect
3. Except
 | 1. Able to execute union, intersect, except commands.
 | **Form:**1. Quiz
2. Assignment
 | Union & Intersect Command1. **Lectures**

**[2x100 minutes]**1. **Structured activities**

**[2x140 minutes]**1. **Individual study**

**[2x140 minutes]**Except Commands1. **Lectures**

**[1x100 minutes]**1. **Structured activities**

**[1x140 minutes]**1. **Individual study**

**[1x140 minutes]** | 1. Union
2. Intersect
3. Except
 | **20 %** |
| 14-15 | 1. View & Control Flow Function
2. Procedure & SQL Function
 | 1. Able to understand about procedure, SQL function, view & control flow function
 | **Form:**1. Quiz
2. Assignment
 | Procedure, SQL Function1. **Lectures**

**[2x100 minutes]**1. **Structured activities**

**[2x140 minutes]**1. **Individual study**

**[2x140 minutes]** | 1. Create Procedures
2. Create Function
 | **15 %** |
| **16** | **Final Evaluation** |  |