	Universitas Negeri Surabaya Vocational Faculty, D4 Informatics Management Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Database Management	5730103172		T=2	P=0	ECTS=3.18	4	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Dodik Arwin Dermawan, S.ST., S.T., M.T.

Learning model	**Case Studies**
Program Learning Outcomes (PLO)	**PLO study program which is charged to the course**
	Program Objectives (PO)
	PLO-PO Matrix

	P.O

PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Short Course Description	This course will discuss databases and their processing starting with a review of basic database material such as the ERD concept which will be continued with EERD (Enhanced Entity Relationship Diagram) which includes the topics of Specialization, Generalization and Categorization. Next, we will continue with a review of SQL and advanced SQL in the form of creating Subqueries, Transact SQL through functions, store procedures and triggers. The query discussion also discusses query optimization. To deepen knowledge about advanced theme databases, client server databases, distributed databases, internet databases, mobile databases, cloud databases, spatial databases and a little about datawarehousing and data mining are also discussed.
References	**Main :**
	1. Elmasri. Navathe. 2017. Fundamental of Database System 7th Edition. Pearson
	Supporters:
Supporting lecturer	Asmunin, S.Kom., M.Kom. Andi Iwan Nurhidayat, S.Kom., M.T. Paramitha Nerisafitra, S.ST., M.Kom.

Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline (*offline*)	Online (*online*)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Students are able to relate database material to advanced database topics	1. Students can explain the concept of ERD 2. Students can explain the ERD Symbol 3. Students can explain the concept of mapping CDM to PDM 4. Students can explain the process of creating a database	**Criteria:** Holistic Rubric	3 X 50			0%
2	Students can use EERD symbols to solve complex database problems	1. Students can explain the concept of EERD 2. Students can differentiate the concepts of specialization, generationalization and categorization 3. Students can explain the concept of EERD mapping 4. Students can apply the EERD concept to case studies	**Criteria:** Holistic Rubric	3 X 50			0%
3	Students can use basic SQL	1. Students can use SQL : DDL 2. Students can use SQL : DML	**Criteria:** Holistic Rubric	3 X 50			0%
4	Students can use Subquery-based SQL	1. Students can write SQL - Subquery for SELECT Operation 2. Students can write SQL - Subquery for INSERT Operation 3. Students can write SQL - Subquery for DELETE Operation 4. Students can write SQL - Subquery for UPDATE Operation	**Criteria:** Holistic Rubric	3 X 50			0%
5	Students can create Functions and Store Procedures in a Database	1. Students can create Functions 2. Students can create Store Procedures	**Criteria:** Holistic Rubric	3 X 50			0%
6	Students can create Triggers in the Database	1. Students can create Triggers 2. Students can use Trigger	**Criteria:** Holistic Rubric	3 X 50			0%

7	Students can explain strategies for Query Optimization	1.Students can mention the factors that influence query optimization 2.Students can explain the concept of indexing 3.Students can explain the concept of database clustering 4.Students can explain SQL concepts in queries	**Criteria:** Holistic Rubric	3 X 50			0%
8	MIDDLE SEMESTER EXAMINATION (UTS)			3 X 50			0%
9	Students understand the concept of the Client Server database. Students can explain the implementation of the Client Server database	1.Students can explain the concept of Client Server database 2.Students can demonstrate the implementation of a Client Server database	**Criteria:** Holistic Rubric	3 X 50			0%
10	Students can explain the concept of a Distributed Database. Students can implement a Distributed Database	1.Students can explain the concept of Distributed Databases 2.Students can implement Distributed Databases	**Criteria:** Holistic Rubric	3 X 50			0%
11	Students can explain the concept of XML. Students can implement XML	1.Students can explain XML concepts 2.Students can implement XML	**Criteria:** Holistic Rubric	3 X 50			0%
12	Students can explain the concept of Spatial and vector Databases. Students can implement Spatial and vector Databases	1.Students can explain the concepts of Spatial and vector Databases 2.Students can implement spatial and vector databases	**Criteria:** Holistic Rubric	3 X 50			0%
13	Students can explain the concept of a Cloud Database. Students can implement a Cloud Database	1.Students can explain the concept of Cloud Database 2.Students can implement Cloud Database	**Criteria:** Holistic Rubric	3 X 50			0%
14	Students can explain the concepts of Datawarehousing, ETL, and OLAPStudents can implement Datawarehousing, ETL, and OLAP	1.Students can explain the concepts of Datawarehousing, ETL, and OLAP 2.Students can implement Datawarehousing, ETL, and OLAP	**Criteria:** Holistic Rubric	3 X 50			0%

15	Students understand the concept of Data Mining, Clustering, Classification, and Association techniques. Students can explain the implementation of Data Mining, Clustering, Classification, and Association techniques	1. Students understand the concepts of Data Mining, Clustering, Classification and Association techniques 2. Students can explain the implementation of Data Mining, Clustering, Classification and Association techniques	**Criteria:** Holistic Rubric	3 X 50			0%
16							0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

Notes

1. **Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
2. **The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
5. **Indicators for assessing** ability in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
6. **Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
7. **Forms of assessment:** test and non-test.
8. **Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
9. **Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
10. **Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
11. **The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
12. TM=Face to face, PT=Structured assignments, BM=Independent study.