



Universitas Negeri Surabaya
Faculty of Engineering,
Electrical Engineering Undergraduate Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date																																	
Data Mining	2020102023		T=2	P=0	ECTS=3.18	5	July 18, 2024																																	
AUTHORIZATION		SP Developer	Course Cluster Coordinator			Study Program Coordinator																																		
				Dr. Lusia Rakhmawati, S.T., M.T.																																		
Learning model	Case Studies																																							
Program Learning Outcomes (PLO)	PLO study program that is charged to the course																																							
	Program Objectives (PO)																																							
	PLO-PO Matrix																																							
		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 50px; text-align: center;">P.O</td> <td colspan="16"></td> </tr> </table>						P.O																																
P.O																																								
	PO Matrix at the end of each learning stage (Sub-PO)																																							
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 50px; text-align: center;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td></td> <td style="width: 20px; text-align: center;">1</td> <td style="width: 20px; text-align: center;">2</td> <td style="width: 20px; text-align: center;">3</td> <td style="width: 20px; text-align: center;">4</td> <td style="width: 20px; text-align: center;">5</td> <td style="width: 20px; text-align: center;">6</td> <td style="width: 20px; text-align: center;">7</td> <td style="width: 20px; text-align: center;">8</td> <td style="width: 20px; text-align: center;">9</td> <td style="width: 20px; text-align: center;">10</td> <td style="width: 20px; text-align: center;">11</td> <td style="width: 20px; text-align: center;">12</td> <td style="width: 20px; text-align: center;">13</td> <td style="width: 20px; text-align: center;">14</td> <td style="width: 20px; text-align: center;">15</td> <td style="width: 20px; text-align: center;">16</td> </tr> </table>						P.O	Week																	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																								
Short Course Description	Basic concepts and understanding of data mining Stages in data mining Data mining models Data mining functions Data mining applications																																							
References	Main :																																							
	1. Jiawei Han, Micheline Kamber, and Pei J. 2012. Data Mining Concepts and Techniques. Third Edition. Elsevier Inc 2. Eko Prasetyo. 2013. Data Mining: Konsep dan Aplikasi menggunakan matlab. 1 st Publised. Andi Publisher																																							
	Supporters:																																							
Supporting lecturer	Unit Three Kartini, S.T., M.T., Ph.D. Arif Widodo, S.T., M.Sc.																																							
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 understand the basic concepts of data mining	<ol style="list-style-type: none"> 1.Explain the basic concepts of data mining 2.Explains data databases and cluster analysis 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.Participation: carried out by observing student activities (weight 2) UTS: carried out by assessment during the middle of the semester (weight 2) UAS: carried out every semester to measure all indicators (weight 3) Assignments: carried out on each indicator (weight 3) Value Student End: 3.Participation Score (2) x Assignment Score (3) x UTS Score (2) x UAS Score (3) divided by 10. 	Presentation, group discussion and reflection 2 X 50			0%
2	Students are able to know about the form of data	<ol style="list-style-type: none"> 1.Explains object and attribute data 2.Explains data visualization 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.Participation: carried out by observing student activities (weight 2) UTS: carried out by assessment during the middle of the semester (weight 2) UAS: carried out every semester to measure all indicators (weight 3) Assignments: carried out on each indicator (weight 3) Value Student End: 3.Participation Score (2) x Assignment Score (3) x UTS Score (2) x UAS Score (3) divided by 10. 	Presentation, group discussion and practice 2 X 50			0%

3	Students are able to understand data preprocessing	<ol style="list-style-type: none"> 1.Explains data preprocessing 2.Explains data cleaning, data integration and data reduction 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.Participation: carried out by observing student activities (weight 2) UTS: carried out by assessment during the middle of the semester (weight 2) UAS: carried out every semester to measure all indicators (weight 3) Assignments: carried out on each indicator (weight 3) Value Student End: 3.Participation Score (2) x Assignment Score (3) x UTS Score (2) x UAS Score (3) divided by 10. 	Presentation, group discussion and practice 2 X 50			0%
4	Students are able to understand process analysis	<ol style="list-style-type: none"> 1.Explain process analysis 2.Explain about data warehouse 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.Participation: carried out by observing student activities (weight 2) UTS: carried out by assessment during the middle of the semester (weight 2) UAS: carried out every semester to measure all indicators (weight 3) Assignments: carried out on each indicator (weight 3) Value Student End: 3.Participation Score (2) x Assignment Score (3) x UTS Score (2) x UAS Score (3) divided by 10. 	Presentation, group discussion and practice 2 X 50			0%

5	Students are able to understand process analysis and data generalization	1.Explain the implementation of a data warehouse 2.Explains data generalization	Criteria: 1.The assessment criteria are carried out by looking at aspects: 2.Participation: carried out by observing student activities (weight 2) UTS: carried out by assessment during the middle of the semester (weight 2) UAS: carried out every semester to measure all indicators (weight 3) Assignments: carried out on each indicator (weight 3) Value Student End: 3.Participation Score (2) x Assignment Score (3) x UTS Score (2) x UAS Score (3) divided by 10.	Presentation, group discussion and practice 2 X 50			0%
6	UTS			2 X 50			0%
7							0%
8							0%
9							0%
10							0%
11							0%
12							0%
13							0%
14							0%
15							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.