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

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Big Data Analysis	5730102192		T=3	P=0	ECTS=4.77	5	July 17, 2024

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

Learning model	**Project Based Learning**
Program Learning Outcomes (PLO)	**PLO study program that 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	The Big Data Analysis course covers the concept of Big Data analysis, including Volume, Velocity, and Variety (3V), then there is predictive analysis, without any constraints on the size of the data being processed. Technological advances in the storage, processing and analysis of Big Data include (a) a rapid reduction in data storage costs in recent years; (b) flexibility and cost effectiveness in data centers and cloud computing for elasticity and storage computing; and (c) the development of new frameworks such as the Hadoop Ecosystem, which allows users to take advantage of distributed computing systems storing large amounts of data through parallel processing. So this technological progress has created several differences between traditional analysis and advanced analysis in Big Data.
References	**Main :**

1. Big Data Analytics, 1st Edition. Editor(s): Govindaraju, Raghavan, and Rao. Release Date: 07 Jul 2015. Imprint: Elsevier.
2. Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data. Editor: EMC Education Services. January 2015.
3. Judith S. Hurwitz, et. al. 2013. Big Data For Dummies, John Wiley & Sons, Inc., Hoboken, New Jersey.

Supporters:	
Supporting lecturer	Salamun Rohman Nudin, S.Kom., 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 understand the basic concepts of big data analytics	1. Explain the meaning of big data 2. Explain the benefits of big data analysis 3. Explain the purpose of big data analysis	**Criteria:** Holistic Rubric	Collaborative learning 3 X 50			0%
2	Students understand the basic concept of Data Analytics Lifecycle	Understand the basic concepts of Data Analytics Lifecycle	**Criteria:** Holistic Rubric	Collaborative learning 3 X 50			0%
3	Students understand the basic concepts of analytical methods	Understand the basic concepts of analytical methods	**Criteria:** Holistic Rubric	Collaborative learning 3 X 50			0%
4	Students understand the basic concepts of analytical methods	Understand the basic concepts of analytical methods	**Criteria:** Holistic Rubric	Collaborative learning 3 X 50			0%
5	Students understand the basic concept of Cluster Analysis	Understand the basic concepts of Cluster Analysis	**Criteria:** Holistic Rubric	Project based learning 3 X 50			0%
6	Students understand the basic concept of Cluster Analysis	Understand the basic concepts of Cluster Analysis	**Criteria:** Holistic Rubric	Project based learning 3 X 50			0%
7	Students understand the basic concept of Associations Rules	Understand the basic concept of Associations Rules	**Criteria:** Holistic Rubric	Collaborative learning 3 X 50			0%
8				3 X 50			0%
9	Students understand the basic concepts of Big Data Tools	Understand the basic concepts of Big Data Tools	**Criteria:** Holistic Rubric	Collaborative learning 3 X 50			0%
10	Students are able to setup Big DataTools	Performing Big DataTools Setup	**Criteria:** Holistic Rubric	Collaborative learning 3 X 50			0%
11	Students are able to understand and carry out Data Ingestion	Understand and perform Data Ingestion	**Criteria:** Holistic Rubric	Collaborative learning 3 X 50			0%
12	Students are able to understand the basic concepts of big data data stores	Understand the basic concepts of big data data stores	**Criteria:** Holistic Rubric	Collaborative learning 3 X 50			0%
13	Students are able to apply big data analytic knowledge in solving cases	Applying big data analytics knowledge in case resolution	**Criteria:** Holistic Rubric	Project based learning 3 X 50			0%
14	Students are able to apply big data analytic knowledge in solving cases	Applying big data analytics knowledge in case resolution	**Criteria:** Holistic Rubric	Project based learning 3 X 50			0%

15	Students are able to apply big data analytic knowledge in solving cases	Applying big data analytics knowledge in case resolution	**Criteria:** Holistic Rubric	Project based learning 3 X 50			0%
16				3 X 50			0%

Evaluation Percentage Recap: Project Based Learning

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.