



Universitas Negeri Surabaya
Faculty of Engineering
, Information Technology Education Undergraduate Study
Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																																																			
Probability and Statistics	8320703083		T=3 P=0 ECTS=4.77	4	July 18, 2024																																																			
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																																																			
		Drs. Bambang Sujatmiko, 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: 100px; height: 20px;"></td> <td colspan="16" style="text-align: center;">P.O</td> </tr> </table>					P.O																																																	
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	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; height: 20px;"></td> <td colspan="16" style="text-align: center;">P.O</td> </tr> <tr> <td></td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td></td> <td style="width: 20px;">1</td> <td style="width: 20px;">2</td> <td style="width: 20px;">3</td> <td style="width: 20px;">4</td> <td style="width: 20px;">5</td> <td style="width: 20px;">6</td> <td style="width: 20px;">7</td> <td style="width: 20px;">8</td> <td style="width: 20px;">9</td> <td style="width: 20px;">10</td> <td style="width: 20px;">11</td> <td style="width: 20px;">12</td> <td style="width: 20px;">13</td> <td style="width: 20px;">14</td> <td style="width: 20px;">15</td> <td style="width: 20px;">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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Short Course Description	This course provides understanding and mastery of the basic concepts of statistics and probability, enumeration of sample points, distribution concepts, calculations of frequency distribution distribution tables, central symptom measurements and location measurements, deviation measurements, moment-skewness and kurtosis, probability theory, sampling, hypothesis testing, analysis regression and correlation as well as non-parametric statistics.																																																							
References	Main :																																																							
	1. Sudaryono, Statistika Probabilitas 13 Teori & Aplikasi, Andi, 2012 Johnson, James L, Probability and Statistics for computer science, wiley interscience, English, 2011																																																							
	Supporters:																																																							
Supporting lecturer	Prof. Dr. Ekohariadi, M.Pd. Dr. Rina Harimurti, S.Pd., M.T.																																																							
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	Know the aims and objectives of statistics and probability	Students know the aims and objectives of statistics and probability	Criteria: 1. The assessment criteria are carried out by looking at aspects: 2.1. Participation: carried out by observing student activities (weight 2) 3.2. UTS: carried out with an assessment during the middle of the semester (weight 2) 4.3. UAS: carried out every semester to measure all indicators (weight 3) 5.4. Task: carried out on each indicator (weight 3) 6. Student Final Grade: 7. Participation Score (2) x Lever Score (3) x UTS Score (2) x UAS Score (3) divided by 10.	Approach: Scientific Model: Cooperative Method: Discussion and question and answer 3 X 50			0%
2	Understand and explain the concept of probability Understand and operate probability formulas	Students understand and are able to explain the concept of probability. Students understand and operate probability formulas	Criteria: Assessment rubric	Approach: Scientific Model: Cooperative Method: Discussion and question and answer 6 X 50			0%
3							0%
4	Understand and explain enumeration rules Understand and explain factorial numbers, permutations and combinations	Students understand and are able to explain enumeration rules. Students understand and are able to explain factorial numbers, permutations and combinations	Criteria: Assessment rubric	Approach: Scientific Model: Cooperative Method: 1 X 1 discussion and question and answer			0%
5	Understand and explain theoretical distribution. Understand and operate uniform, binomial and multinomial distribution formulas	Students understand and are able to explain theoretical distributions. Students understand and are able to operate uniform, binomial and multinomial distribution formulas	Criteria: Assessment rubric	Approach: Scientific Model: Cooperative Method: Discussion and question and answer 9 X 50			0%
6							0%
7							0%

8	UTS		Criteria: Assessment rubric	Problem Based Learning 3 X 50			0%
9	Understand and explain the normal distribution Explain the properties of the normal distribution Understand the use of the standard normal curve	Students understand and explain the normal distribution. Students explain the properties of the normal distribution. Students understand the use of the standard normal curve	Criteria: Assessment rubric	Approach: Scientific Model: Cooperative Method: Discussion and question and answer 6 X 50			0%
10							0%
11	Understand and explain sample statistics and population parameters Understand and explain types of sampling Understand the concept of sampling distribution and its calculations	Students understand and explain sample statistics and population parameters. Students understand and explain types of sampling. Students understand the concept of sampling distribution and its calculations	Criteria: Assessment rubric	Approach: Scientific Model: Cooperative Method: Discussion and question and answer 6 X 50			0%
12							0%
13	Understand and explain the concept of parameter estimation. Understand and explain the criteria for a good estimator	Students understand and explain the concept of parameter estimation. Students understand and explain the criteria for a good estimator	Criteria: Assessment rubric	Approach: Scientific Model: Cooperative Method: Discussion and question and answer 3 X 50			0%
14	Understand and explain hypotheses and research hypotheses Understand and explain various types of errors Understand and operate formulas for various hypothesis tests	Students understand and are able to explain hypotheses and research hypotheses Students understand and are able to explain various types of errors Students understand and are able to operate formulas for various hypothesis testing	Criteria: Assessment rubric	Approach: Scientific Model: Cooperative Method: 1 X 1 discussion and question and answer			0%
15							0%
16	UAS		Criteria: Assessment rubric	UAS 3 X 50			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.