



**Universitas Negeri Surabaya**  
**Faculty of Education,**  
**Doctoral Study Program in Educational Technology**

Document Code

**SEMESTER LEARNING PLAN**

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date
Education Statistics	8600302037		T=2 P=0 ECTS=5.04	2	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Prof. Dr. Mustaji, M.Pd.

Learning model	Case Studies
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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	This course examines descriptive and inferential statistics including the concepts of measurement scales, tabulation, graphs, central tendency, variability, estimation, and hypothesis testing with several parametric statistical techniques and several non-parametric techniques and their requirements.
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References	<b>Main :</b> <ol style="list-style-type: none"> <li>1. Prof. Drs. Sutrisno Hadi. M.A. 2004. <i>Statistik jilid 2</i> . Yogyakarta. Penerbit ANDI Yogyakarta..</li> <li>2. Prof. Drs. Sutrisno Hadi. M.A . 2001. <i>Teknik Anava</i> . Yogyakarta: Penerbit Andi Yogyakarta..</li> <li>3. Drs. Riduwan, M.BA, Drs. H. Sunarto, M.Si. 2009. <i>Pengantar STATISTIKA: untuk Penelitian Pendidikan, Sosial, Ekonomi, Komunikasi dan Bisnis</i> .Bandung: ALFABETA.</li> <li>4. Prof. Dr. Sugiyono. 2010. <i>STATISTIK NONPARAMETRIS</i> . Bandung :CV. ALFABETA..</li> <li>5. Ferguson, George A., Yoshio Takane. <i>Analysis Statistical In Psychology and Education</i> . New York: McGraw-Hill Book Company.</li> <li>6. Dr. Haryanto, M.Pd. Statistik Untuk Penelitian. Bandung:</li> </ol>
	<b>Supporters:</b>

Supporting lecturer	Dr. Fajar Arianto, S.Pd., M.Pd.
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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	Understanding the scope of educational statistics courses	Orientation and understanding the scope of lecture material	<b>Criteria:</b> 1. Concepts assessed: 2. Basic concepts of statistics	Lecture, question and answer 2 X 50			0%

2	Understand and be able to explain basic concepts and definitions of statistics, types, characteristics, variables, data and data scales.	Understanding educational statistics: 1. Definition 2. Characteristics 3. Functions and types of statistics 4. Variables and data scale	<b>Criteria:</b> 1. Concepts assessed: 2. Basic concepts of statistics	Lecture, question and answer 2 X 50			0%
3	Understand and be able to compile frequency distribution tables for single data and group data.	Compile a single frequency distribution table into categories as well as cumulative frequency and relative frequency/percentage	<b>Criteria:</b> Assignment: Given data, you are assigned to compile single and group frequency distribution tables as well as cumulative and relative frequency distribution tables.	Lecture, assignment 2 X 50			0%
4	Understand and create graphs	Compile histogram graphs, frequency polygon graphs and ogive graphs.	<b>Criteria:</b> Assignment: given data, students are assigned to create various types of graphs.	Lecture, assignment 2 X 50			0%
5	Understand and apply central tendency and measurement of location symptoms	Understanding and applying central tendency includes: understanding central tendency which consists of mean, median and mode and being able to apply location measurements including: Quartiles, deciles and percentiles.	<b>Criteria:</b> Assignment: given data to calculate the mean, median and mode.	Cermah, assignment 2 X 50			0%
6	Understand and apply variability measurements and standard values.	Measure variability with range, mean deviation, standard deviation and standard values.	<b>Criteria:</b> Given an assignment in the form of some data to calculate variability	Lecture, assignment 2 X 50			0%
7	Understand normal curves and how to apply them with available data	Understanding the normal curve includes: understanding its characteristics, and how to apply it when given a problem.	<b>Criteria:</b> Given a data case, you can solve it using the normal curve concept.	Lecture, assignment 2 X 50			0%
8	Understanding inferential statistics serves for estimation.	Understand and be able to apply ordinary parameter estimation and percent parameter estimation.	<b>Criteria:</b> Given a case, you can solve the case based on the parameter estimation formula.	Lecture, assignment 2 X 50			0%
9	Understand and explain comparative hypothesis testing various t/t test techniques, criteria and conclusions	Understand the comparative hypothesis test t test, the null hypothesis and alternative hypothesis and their criteria.	<b>Criteria:</b> 1. The task of carrying out a t test analysis is based on the available data. 2. Task: given data to be analyzed using the t test technique for correlated samples.	Lectures, discussions 2 X 50			0%
10	sub summative exam	sub summative exam		2 X 50			0%
11	Understand and apply point biserial correlation techniques. And multiple correlation.	Understand the point biserial correlation and multiple correlation formulas and be able to apply how to calculate them and test their significance.	<b>Criteria:</b> Given appropriate data, point biserial correlation and multiple correlation analysis can be carried out.	Lecture, question and answer 2 X 50			0%
12	Understand and apply the Chi square difference test, relationship test and normality test.	Able and able to apply the Chi Square formula for difference tests	<b>Criteria:</b> Given appropriate data, point biserial correlation and multiple correlation analysis can be carried out.	Lecture, question and answer 2 X 50			0%
13	Understand and apply single data Anava	1. Define one-way anova. 2. Calculating one-way ANOVA. 3. Applying one-way ANOVA with practical steps.	<b>Criteria:</b> The task given is to analyze one-way ANOVA data	Lectures, assignments, questions and answers 2 X 50			0%

14	Understand and apply linear regression of two predictors.	1. Understand the meaning of regression 2. Understand predictors and criteria 3. Master linear regression analysis of two predictors.	<b>Criteria:</b> The task given is to analyze one-way ANOVA data	Lecture, assignment 2 X 50			0%
15	Understand and be able to describe the meaning and characteristics of non-parametric statistics and be able to differentiate between parametric statistics.	1. Describe the meaning of non-parametric statistics. 2. Explain the characteristics of non-parametric statistics. 3. Be able to differentiate non-parametric statistics from parametric statistics	<b>Criteria:</b> Quiz on basic concepts of Nonparametric Statistics.	Lecture, assignment 2 X 50			0%
16	Understand and apply the sign test and median test with the significance test criteria and how to draw conclusions	1. Understand the use of the sign test formula. 2. Can apply the sign test formula to analyze data. Can carry out significance tests from the results of sign test calculations	<b>Criteria:</b> Task: given appropriate data, sign test and median test analysis can be carried out.	Lecture, assignment 2 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.**