					Document Code
	Universitas Negeri Surabaya **Faculty of Engineering,** **Building Engineering Education Undergraduate Study Program**				

SEMESTER LEARNING PLAN

Courses		CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Statistics and Probability		8320502207		T=2	P=0	ECTS=3.18	3	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	....	....	Dr. Gde Agus Yudha Prawira Adistana, 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

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 provides an understanding of the basic theory of statistics and types of data, presentation and analysis of data in supporting the preparation of a thesis both in statistical analysis, both descriptive and inferential statistics (parametric and non-parametric). Learning is carried out by applying a constructivist approach. The learning activity ends with an exercise in analyzing and presenting research data.

References	**Main :**	
	1.	Budiyono. 2009. Statistika untuk Penelitian. Surakarta: Sebelas Maret University Press. Cornelius, Trihendradi. 2005. *Step by Step SPSS* , Analisis Data Statistik. Yogyakarta: Andi Offset. Furqon. 2011. *Statistika Terapan untuk Penelitian* . Bandung: Alfabeta. Mangkuatmodjo, Soegiyarto. 2015. *Statistik Deskriptif* . Jakarta: Rineka Cipta Mason, R.D., Lind, D.A., Marcal, W.G. 1988. *Statistics An Introduction* . NY: HBJ, Publishers. Sugiyono. 2013. *Statistika untuk Penelitian* . Bandung: Alfabeta.
	Supporters:	

Supporting lecturer	NANIK ESTIDARSANI Prof. Dr. Suparji, S.Pd., M.Pd. Wahyu Dwi Mulyono, S.Pd., M.Pd.

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	Present data in various forms.	1.Explain the various types of data presentation. 2.Presenting data with various presentation models	**Criteria:** Criteria: correct oral questions are given a score which is part of the Participation SCORE	direct learning method with survey assignment strategies. 2 X 50			0%
2	Students can apply the meaning of mean, standard deviation, variance, median and mode	1.Explain the application of mean, standard deviation, variance, median, and mode. 2.Calculate the mean, standard deviation, variance, median, and mode.	**Criteria:** Criteria: correct oral questions are given a score which is part of the Participation SCORE	Learning Approach/Model: Lecture, discussion, and question and answer. Learning strategy: survey & assignment 2 X 50			0%
3	Students can analyze SD, moment, skewness, and kurtosis	1.Explain the meaning of moment, skewness, and kurtosis. 2.Calculates moments, skewness, and kurtosis.	**Criteria:** Criteria: correct oral questions are given a score which is part of the Participation SCORE	Learning Approach/Model: Lecture, discussion, and question and answer. Learning strategy: survey & assignment 2 X 50			0%
4	Students can calculate probabilities, permutations, combinations, and expectations	1.Students can: Explain the meaning of probability, permutation, combination and expectation. 2.apply probability, permutation, combination, and expectation with case studies in the field.	**Criteria:** 1.Criteria: 2.Correct oral questions are given a score which is part of the Participation SCORE written questions as TakeHome related to Probability, Permutation, Combination and Expectation indicators with a proportion of 40% : 20% : 20% : 20%	Learning Approach/Model: Lecture, discussion, and question and answer. Learning strategy: survey & assignment 4 X 50			0%
5							0%
6	Students can determine sample size using the Krijcie table and Harry King's nomogram in educational research data applications.	1.Students can: Explain the meaning of population and sample. 2.Population, Sample, and Sampling Techniques 3.Determining sample size and collection techniques using Krijcie tables and Harry King nomograms in educational research data applications.	**Criteria:** Correct oral questions are given a score which is part of the Participation SCORE written questions related to population indicators, sample size and sampling technique with a proportion of 20% : 40% : 40%	Learning Approach/Model: Direct Learning Learning strategy: Lectures, exercises and questions and answers 2 X 50			0%

7	Students can: calculate probabilities, permutations, combinations, and expectations, determine sample size using Krijcie tables and Harry King nomograms in educational research data applications.	1.The indicator calculates probabilities, permutations, combinations and expectations 2.determining sample size using the Krijcie table and Harry King's nomogram in educational research data applications.	**Criteria:** 1.Value Proportion: 2.Permutation 30%Sample Size 30%Sampling Technique 40%	Lectures, exercises, discussions and questions and answers. 2 X 50				0%
8	Students can state descriptive, comparative and associative hypotheses and test hypotheses.	1.Students can: explain the function and differences between various forms of hypotheses. 2.state descriptive, comparative and associative hypotheses. 3.calculate hypothesis tests and interpret them.	**Criteria:** Correct oral questions are given a score which is part of the Participation SCORE using the performance sheet on the task given, in the form of a Takehome with a variety of questions (scores range from 0-100).	Learning Approach/Model: Lecture, discussion, and question and answer. Learning strategy: survey & assignment 2 X 50				0%
9	Students can use: t test to test hypotheses software (Software) to test hypotheses manual methods and software (Software) to interpret the results of calculations	1.Students can: Explain the function and differences in using the t test 2.Use the t test to test hypotheses and interpret	**Criteria:** 1.Criteria: 2.Correct oral questions are given a score which is part of the Participation SCORE. Written questions related to hypothesis indicators and hypothesis testing using performance sheets on the tasks given, in the form of Takehome with a variety of questions (scores range from 0-100).	Learning Approach/Model: Lectures, exercises, discussions and questions and answers. 4 X 50				0%
10	Students can calculate single and partial correlations	1.Students can: explain the function and differences between single and partial correlations 2.calculate single and partial correlations	**Criteria:** Correct oral questions are given a score which is part of the Participation SCORE	Lectures, exercises, discussions and questions and answers. 2 X 50				0%

11	Students can calculate Single Regression and Multiple Regression	1. Students can: explain the purpose, function of Single Regression and Multiple Regression 2. calculate Single Regression and Multiple Regression using simple methods and with SPSS software	**Criteria:** Correct oral questions are given a score which is part of the assignment Participation SCORE with an activeness and discipline assessment sheet and a performance sheet on the assignment given, in the form of a Takehome with a variety of questions (scores range from 0-100).	Lectures, exercises, discussions and questions and answers. 4 X 50			0%
12	Students can analyze the variance function (ANOVA)	1. Students can: explain the meaning of anava 2. calculating anava	**Criteria:** Correct oral questions are given a score which is part of the Participation SCORE using the performance sheet on the task given, in the form of a Takehome with a variety of questions (scores range from 0-100).	Lectures, exercises, discussions and questions and answers. 2 X 50			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.