



Universitas Negeri Surabaya
Faculty of Education,
Psychology Undergraduate Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																																																	
BASIC STATISTICS	7320103153	Compulsory Study Program Subjects	T=3 P=0 ECTS=4.77	1	August 8, 2022																																																	
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																																																	
	Desi Nurwidawati, S.Si., M.Sc		Dr. Damajanti Kusuma Dewi, M.Si		Yohana Wuri Satwika, S.Psi., M.Psi.																																																	
Learning model	Case Studies																																																					
Program Learning Outcomes (PLO)	PLO study program that is charged to the course																																																					
	Program Objectives (PO)																																																					
	PO - 1	Able to apply data analysis techniques and interpretation for research in the field of psychology																																																				
	PLO-PO Matrix																																																					
		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="width: 50px; height: 20px;">P.O</td></tr> <tr><td style="width: 50px; height: 20px;">PO-1</td></tr> </table>				P.O	PO-1																																															
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PO-1																																																						
PO Matrix at the end of each learning stage (Sub-PO)																																																						
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td rowspan="2" style="width: 50px; height: 20px;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 15px;">1</td><td style="width: 15px;">2</td><td style="width: 15px;">3</td><td style="width: 15px;">4</td><td style="width: 15px;">5</td><td style="width: 15px;">6</td><td style="width: 15px;">7</td><td style="width: 15px;">8</td><td style="width: 15px;">9</td><td style="width: 15px;">10</td><td style="width: 15px;">11</td><td style="width: 15px;">12</td><td style="width: 15px;">13</td><td style="width: 15px;">14</td><td style="width: 15px;">15</td><td style="width: 15px;">16</td> </tr> <tr> <td style="width: 50px; height: 20px;">PO-1</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>				P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	PO-1																
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PO-1																																																						
Short Course Description	This course is designed to discuss various statistical concepts applied in completing quantitative research in the field of psychology. The discussion material includes descriptive and inferential statistics, both parametric and non-parametric statistics, as well as their applications using statistical software programs. It is hoped that this will provide an understanding of statistical concepts and methods for analyzing and completing quantitative research in the field of psychology, as well as as an aid in making decisions rationally and prioritizing data objectivity (honesty).																																																					
References	Main :																																																					
	1. Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: Mc Graw Hill 2. Michael, Longnecker, 2010. An Introduction Statistical Methods and Data Analysis . Cengage Learning.																																																					
	Supporters:																																																					
	1. Winarsunu, T. 2012. Statistik dalam Penelitian Psikologi dan Pendidikan. Malang: UMM																																																					
Supporting lecturer	Dr. Eko Darminto, M.Si. Dr. Damajanti Kusuma Dewi, S.Psi., M.Si. Dr. Sjafiatul Mardiyah, S.Sos., M.A. Desi Nurwidawati, S.Si., M.Sc. Onny Fransinata Anggara, S.Psi., M.Psi., Psikolog Vania Ardelia, S.Psi., M.Sc. Monica Widayaswari, 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	Master statistical concepts and techniques, the basics of statistical analysis and their relationship with research and scientific development	<ol style="list-style-type: none"> 1.Can differentiate between the meaning of statistics and statistics. 2.Can mention the basics of statistical analysis 3.Can explain the meaning and types of data 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.Criteria: correct oral questions are given a score which is part of the Participation SCORE 2.If a student gives a question with a score of 2, and the student answers a question with a score of 5 <p>Form of Assessment : Participatory Activities</p>	direct learning method with survey assignment strategies. 2 X 50	The lecturer provides an explanation of the material. The lecturer asks questions so that students provide responses to check student understanding.	<p>Material: Basic concepts of statistics</p> <p>References:</p> <hr/> <p>Material: Measurement scales and data types</p> <p>References:</p> <hr/> <p>Material: Descriptive statistics and inferential statistics</p> <p>References:</p> <hr/> <p>Material: Basic concepts of statistics, measurement scales and types of data.</p> <p>Reference: <i>Bluman, Allan G. 2018. Elementary Statistics, seventh edition. Boston: McGraw Hill</i></p>	3%
2	Mastering statistical data presentation techniques	<ol style="list-style-type: none"> 1.Can organize and present data in the form of frequency distribution tables 2.Can organize and present data in graphical form 	<p>Criteria: -</p> <p>Form of Assessment : Participatory Activities</p>	Learning Approach/Model: Lecture, discussion, and question and answer. Learning strategy: survey & assignment 2 X 50	Lectures, discussions and questions and answers	<p>Material: Various types of data presentation in the form of tables</p> <p>References:</p> <hr/> <p>Material: Various graphic presentations (bars, circles, lines)</p> <p>References:</p>	3%
3	Mastering statistical techniques to determine the size of data concentration, data distribution, and location	<ol style="list-style-type: none"> 1.Can perform statistical operations to calculate data centering (average value (mean score), median, and mode) 2.Can perform statistical operations to calculate the distribution of data (range, average deviation, standard deviation, variance, Z value) 3.Can perform statistical operations to calculate quartile and percentile values 	<p>Criteria: Rubric</p> <p>Form of Assessment : Participatory Activities, Practice/Performance</p>	Approach: 3 X 50 project based learning		<p>Material: Measures of centering (mean, median, mode)</p> <p>References:</p>	3%

4	Mastering statistical techniques to calculate data variability	1.Able to calculate standard deviation 2.Able to calculate variance 3.Able to calculate percentiles	Criteria: Rubric Form of Assessment : Participatory Activities, Practice/Performance	Direct learning case-based learning 6 X 50		Material: Data Variability References: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i>	3%
5	Mastering the concept of normal distribution in applied quantitative research	Understanding Mean Deviation, Variety, Standard Deviation 2. Coefficient of variation 3. Standard Value (Z Score)	Criteria: If a student gives a question with a score of 2, and the student answers the question with a score of 10 Form of Assessment : Participatory Activities, Practice/Performance	The lecturer provides a presentation of the material and examples of questions. Students work on applied problems on the concept of normal distribution.		Material: Z score References: Material: Normal curve References:	3%
6	Mastering statistical techniques to test hypotheses regarding one and two group difference tests	Students are able to solve applied t test questions	Criteria: If a student gives a question with a score of 2, and the student answers the question with a score of 10 Form of Assessment : Participatory Activities, Practice/Performance	Learning Approach/Model: Direct Learning Learning method: Lectures, exercises, and questions and answers/discussions 2 X 50		Material: t test References: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i>	3%
7	Mastering statistical techniques to test hypotheses about difference tests of more than two groups	Students are able to solve applied Anava test questions	Criteria: If a student gives a question with a score of 2, and the student answers the question with a score of 10 Form of Assessment : Participatory Activities, Practice/Performance	Learning Approach/Model: Direct Learning Learning method: Lectures, exercises, and questions and answers/discussions 2 X 50		Material: Variance Analysis References: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i>	3%
8	Midterm exam	calculate data, carry out hypothesis testing and interpret it.	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). Form of Assessment : Participatory Activities, Practice/Performance	Learning Approach/Model: Lecture, discussion, and question and answer. Learning strategy: survey & assignment 3 X 50		Material: Material 1-7 References: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i>	20%
9	Mastering statistical techniques to test hypotheses for the relationship between two variables	Able to master product moment correlation tests, simple and multiple regression	Criteria: If a student gives a question with a score of 2, and the student answers the question with a score of 10 Form of Assessment : Participatory Activities, Practice/Performance	Learning Approach/Model: Lectures, exercises, discussions and questions and answers. 4 X 50		Material: Product moment correlation test, simple and multiple regression Reference: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i> Material: Product moment correlation test and multiple correlation Reference: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i>	3%

10	Students can calculate and interpret simple and multiple regression analysis	Mastering data calculations and their interpretation for simple and multiple regression analysis	<p>Criteria:</p> <ol style="list-style-type: none"> 1. Correct oral questions are given a score which is part of the Participation SCORE 2. If a student gives a question with a score of 2, and the student answers the question with a score of 10 <p>Form of Assessment : Participatory Activities, Practice/Performance</p>	Lectures, exercises, discussions and questions and answers. 2 X 50		<p>Material: Regression Analysis</p> <p>Bibliography: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i></p>	3%
11	Students are able to carry out non-parametric statistical tests to test differences between two groups	calculate data, carry out hypothesis tests and interpret them for the sign test, Wilcoxon test, and Mann Whitney test	<p>Criteria:</p> <ol style="list-style-type: none"> 1. 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). 2. If a student gives a question with a score of 2, and the student answers the question with a score of 10 <p>Form of Assessment : Participatory Activities, Practice/Performance</p>	Lectures, exercises, discussions and questions and answers. 4 X 50		<p>Material: Analysis of the sign test, Wilcoxon test, and Mann Whitney test.</p> <p>Reference: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i></p>	3%
12	Students are able to carry out non-parametric statistical tests, tests of differences in more than two groups (Kruskal Wallis test)	calculate data, carry out hypothesis tests and interpret them non-parametric statistical tests, two group difference tests, non-parametric statistical tests, two group difference tests.	<p>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).</p> <p>Form of Assessment : Participatory Activities, Practice/Performance</p>	Lectures, exercises, discussions and questions and answers. 2 X 50		<p>Material: non-parametric statistical test, two group difference test (Kruskal Wallis test)</p> <p>Reference: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i></p>	5%
13	Students are able to carry out non-parametric statistical tests to test the relationship between two variables (Spearman correlation test) and their interpretation	Students are able to carry out non-parametric statistical tests to test the relationship between two variables (Spearman correlation test) and their interpretation	<p>Criteria:</p> <ol style="list-style-type: none"> 1. 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). 2. If a student gives a question with a score of 2, and the student answers the question with a score of 10 <p>Form of Assessment : Participatory Activities, Practice/Performance</p>	Lectures, exercises, discussions and questions and answers. 2 X 50		<p>Material: Spearman correlation test</p> <p>References: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i></p>	5%

14	Able to understand and use sampling techniques in quantitative research	Able to understand and use sampling techniques in quantitative research	Criteria: If a student gives a question with a score of 2, and the student answers the question with a score of 10 Form of Assessment : Participatory Activities	Lectures/presentations, discussions, demonstrations, exercises, homework, feedback 3 X 50		Material: Sampling Techniques References: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i>	5%
15	Able to use statistical software for data processing	Able to use statistical software for data processing	Criteria: If a student gives a question with a score of 2, and the student answers the question with a score of 10 Form of Assessment : Participatory Activities, Practice/Performance	3 X 50 project based learning		Material: Data processing practices References: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i>	5%
16	Mastering skills 1 to 15	Mastering indicators 1 to 15	Criteria: If a student gives a question with a score of 2, and the student answers the question with a score of 10	3 X 50 Semester Final Exam		Material: Material 1 to 15 References: <i>Bluman, Allan G. 2007. Elementary Statistics, seventh edition. Boston: McGraw Hill</i>	30%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	30.5%
2.	Practice / Performance	19.5%
		50%

Notes

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Forms of assessment:** test and non-test.
- 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.
- 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.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- 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%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.