



**Universitas Negeri Surabaya
Faculty of Economics and Business
Bachelor of Management Study Program**

**Document
Code**

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Statistics II	6120103159	Compulsory Study Program Subjects	T=3	P=0	ECTS=4.77	2	August 12, 2023
AUTHORIZATION	SP Developer		Course Cluster Coordinator			Study Program Coordinator	
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Learning model	Project Based Learning
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Program Learning Outcomes (PLO)	PLO study program which is charged to the course	
	PLO-5	(PLO 7) Graduates are able to manage organizations ethically

Program Objectives (PO)	
PO - 1	Students are able to choose inferential statistical methods that suit the type of data to solve problems.
PO - 2	Students are able to correctly interpret the results of inferential statistical data analysis.
PO - 3	Students are able to solve statistical inference problems correctly using appropriate computer software.
PO - 4	Students are able to solve statistical inference problems correctly using appropriate computer software.

PLO-PO Matrix											
	<table border="1"> <tr> <td>P.O</td> <td>PLO-5</td> </tr> <tr> <td>PO-1</td> <td></td> </tr> <tr> <td>PO-2</td> <td></td> </tr> <tr> <td>PO-3</td> <td></td> </tr> <tr> <td>PO-4</td> <td></td> </tr> </table>	P.O	PLO-5	PO-1		PO-2		PO-3		PO-4	
P.O	PLO-5										
PO-1											
PO-2											
PO-3											
PO-4											

PO Matrix at the end of each learning stage (Sub-PO)																																																																																																						
	<table border="1"> <tr> <td rowspan="2">P.O</td> <td colspan="16">Week</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td> </tr> <tr> <td>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> <tr> <td>PO-2</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> <tr> <td>PO-3</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> <tr> <td>PO-4</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																	PO-2																	PO-3																	PO-4																
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Short Course Description	This course contains induction or inferential statistics which contains statistical tests and is able to formulate procedural solutions to statistical problems. Able to make strategic decisions in the field of Statistics II (Inductive statistics) based on analysis of information and data, and provide guidance in choosing various alternative solutions. This course aims to improve research skills and provisions for working on a thesis. The learning method is through lectures by facilitators (lecturers) and uses drill or practice methods. This aims to improve students' abilities through practice questions given by the facilitator.
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References	Main :
	<ol style="list-style-type: none"> Suharyadi dan Purwanto. 2016. Statistika Modern Untuk Ekonomi Dan Bisnis. Jakarta: Salemba Empat. Santoso, Singgih. 2014. Panduan Lengkap SPSS 20 (edisi revisi). Jakarta: Elex Komputindo Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. Teknik-teknik Statistika dalam Bisnis & Ekonomi. Jakarta: Salemba Empat Murray, Spiegel R. 2004. Schaums Outlines Teori dan Soal-soal Probabilitas dan Statistik Edisi Kedua. Jakarta: Penerbit Erlangga

		Supporters:					
		<ol style="list-style-type: none"> Hayes, Andrew F. 2018. Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach Third Edition Gujarati, Damodar N. 2003. Basic Econometrics Joseph F. Hair, et.all. 2019. Multivariate Data Analysis: A Global Perspective 					
Supporting lecturer		Dr. Purwohandoko, M.M. Dr. Sanaji, S.E., M.Si. Dr. Andre Dwijanto Witjaksono, S.T., M.Si. Agus Frianto, S.T., S.E., M.M. Widyastuti, S.Si., M.Si. Dwi Yuli Rakhmawati, S.Si., M.Si., Ph.D. Riska Dhenabayu, S.Kom., M.M. Syaifurizal Wijaya Putra, S.E., M.M. Rasyidi Faiz Akbar, S.E., M.M. Nunik Dwi Kusumawati, S.M., M.S.M.					
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	Understand the meaning of statistical inference and hypothesis	<ol style="list-style-type: none"> Able to understand inferential statistics Able to understand the meaning of hypothesis and carry out hypothesis testing 	Criteria: <ol style="list-style-type: none"> Holistic rubric Non-test form: Summarizing lecture material Form of Assessment : Participatory Activities	Discussion, case study, skills practice 3 x 50		Material: inferential statistics and hypotheses References: <i>Suharyadi and Purwanto. 2016. Modern Statistics for Economics and Business. Jakarta: Salemba Empat.</i> <hr/> Material: inferential statistics and hypotheses References: <i>Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. Statistical Techniques in Business & Economics. Jakarta: Salemba Four</i>	3%
2	Analyze the data using the chi square test	<ol style="list-style-type: none"> Able to test the relationship between two nominal/ordinal variables with chi square Able to test normality using chi square 	Criteria: <ol style="list-style-type: none"> Holistic Rubric Non-test form: Summarizing lecture material Form of Assessment : Participatory Activities	Discussion, case study, skills practice 3 x 50		Material: chi square test References: <i>Suharyadi and Purwanto. 2016. Modern Statistics for Economics and Business. Jakarta: Salemba Empat.</i> <hr/> Material: chi square test References: <i>Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. Statistical Techniques in Business & Economics. Jakarta: Salemba Four</i>	3%

3	Analyzing data using the Wilcoxon test	Able to analyze data with the Wilcoxon test	Criteria: Holistic Rubric Form of Assessment : Participatory Activities	Discussion, case study, skills practice 3 x 50		Material: chi square test References: <i>Suharyadi and Purwanto. 2016. Modern Statistics for Economics and Business. Jakarta: Salemba Empat.</i> Material: chi square test References: <i>Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. Statistical Techniques in Business & Economics. Jakarta: Salemba Four</i>	3%
4	Analyze the average difference test with the t test	Able to calculate and analyze different tests for one population	Criteria: 1.Holistic rubric 2.Non-test form: Summarizing lecture material Form of Assessment : Participatory Activities	Read literature, listen to explanations, and do 3 x 50 questions		Material: Test of Differences Literature: <i>Suharyadi and Purwanto. 2016. Modern Statistics for Economics and Business. Jakarta: Salemba Empat.</i> Material: Difference test References: <i>Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. Statistical techniques in business & economics. Jakarta: Salemba Four</i>	3%
5	Analyze the average difference test with the t test	Able to calculate and analyze difference tests for two independent populations	Criteria: 1.Holistic rubric 2.Non-test form: Summarizing lecture material Form of Assessment : Participatory Activities	Read literature, listen to explanations, and do 3 x 50 questions		Material: Test of Differences Literature: <i>Suharyadi and Purwanto. 2016. Modern Statistics for Economics and Business. Jakarta: Salemba Empat.</i> Material: Difference test References: <i>Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. Statistical techniques in business & economics. Jakarta: Salemba Four</i>	3%

6	Analyze the average difference test with the t test	Able to calculate and analyze difference tests for two independent populations	Criteria: 1.Holistic rubric 2.Non-test form: Summarizing lecture material Form of Assessment : Participatory Activities	Read literature, listen to explanations, and do 3 x 50 questions		Material: Test of Differences Literature: Suharyadi and Purwanto. 2016. <i>Modern Statistics for Economics and Business.</i> Jakarta: Salemba Empat. Material: Difference test References: Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. <i>Statistical techniques in business & economics.</i> Jakarta:Salemba Four	3%
7	Analyze the average difference test with the t test	Able to calculate and analyze difference tests for two related populations	Criteria: 1.Holistic rubric 2.Non-test form: Summarizing lecture material Form of Assessment : Participatory Activities	Read literature, listen to explanations, and do 3 x 50 questions		Material: Test of Differences Literature: Suharyadi and Purwanto. 2016. <i>Modern Statistics for Economics and Business.</i> Jakarta: Salemba Empat. Material: Difference test References: Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. <i>Statistical techniques in business & economics.</i> Jakarta:Salemba Four	3%
8	MIDTERM EXAM		Form of Assessment : Test	3 X 50			20%
9	Analyzing one-way Analysis of Variance (ANOVA).	Able to calculate and analyze one-way ANOVA	Criteria: Holistic rubric Form of Assessment : Participatory Activities	Read literature, listen to explanations, and do 3 X 50 questions		Material: ANOVA (Analysis of Variance) References: Suharyadi and Purwanto. 2016. <i>Modern Statistics for Economics and Business.</i> Jakarta: Salemba Empat. Material: ANOVA (Variance Analysis) References: Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. <i>Statistical Techniques in Business & Economics.</i> Jakarta:Salemba Four	5%

10	Analyzing Variance Analysis	Able to calculate and analyze two-way ANOVA	Form of Assessment : Participatory Activities	Read literature, listen to explanations, and do 3 x 50 questions		Material: ANOVA (Analysis of Variance) References: Suharyadi and Purwanto. 2016. <i>Modern Statistics for Economics and Business</i> . Jakarta: Salemba Empat. Material: ANOVA (Variance Analysis) References: Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. <i>Statistical Techniques in Business & Economics</i> . Jakarta: Salemba Four	5%
11	Analyzing linear regression	Able to calculate and analyze simple linear regression	Criteria: 1.Holistic rubric 2.Non-test form: Summarizing lecture material Form of Assessment : Participatory Activities	Read literature, listen to explanations, and do 6 X 50 questions		Material: Linear Regression References: Suharyadi and Purwanto. 2016. <i>Modern Statistics for Economics and Business</i> . Jakarta: Salemba Empat. Material: Linear Regression References: Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. <i>Statistical Techniques in Business & Economics</i> . Jakarta: Salemba Four	4%
12	Analyzing linear regression	1.Able to calculate and analyze multiple linear regression 2.Able to calculate and analyze classical assumption tests	Criteria: 1.Holistic rubric 2.Non-test form: Summarizing lecture material Form of Assessment : Participatory Activities	Read literature, listen to explanations, and do 6 X 50 questions		Material: Linear Regression References: Suharyadi and Purwanto. 2016. <i>Modern Statistics for Economics and Business</i> . Jakarta: Salemba Empat. Material: Linear Regression References: Lind, Douglas A Marchal, William G Wathen, Samuel A. 2015. <i>Statistical Techniques in Business & Economics</i> . Jakarta: Salemba Four	5%
13	Analyzing descriptive statistics using SPSS	1.Able to understand input data using SPSS 2.Able to analyze descriptive statistics using SPSS	Criteria: 1.Holistic rubric 2.Non-test form: Summarizing lecture material	Read literature, listen to explanations, and do 6 X 50 questions		Material: Descriptive Statistics Bibliography: Santoso, Singgih. 2014. <i>Complete Guide to SPSS 20 (revised edition)</i> . Jakarta: Elex Komputindo	5%

14	Analyzing different tests using SPSS	1. Able to analyze difference tests (t tests) using SPSS 2. Able to analyze ANOVA using SPSS	Criteria: 1. Holistic rubric 2. Non-test form: Summarizing lecture material Form of Assessment : Participatory Activities	Read literature, listen to explanations, and do 6 X 50 questions		Material: T test and ANOVA (Analysis of Variance) References: Santoso, Singgih. 2014. <i>Complete Guide to SPSS 20 (revised edition)</i> . Jakarta: Elex Komputindo	5%
15	Analyze linear regression using SPSS	1. Able to analyze simple linear regression using SPSS 2. Able to analyze multiple linear regression using SPSS 3. Able to analyze classical assumption tests using SPSS	Criteria: 1. Holistic rubric 2. Non-test form: Summarizing lecture material Form of Assessment : Participatory Activities	Read literature, listen to explanations, and do 6 X 50 questions		Material: Linear Regression References: Santoso, Singgih. 2014. <i>Complete Guide to SPSS 20 (revised edition)</i> . Jakarta: Elex Komputindo	5%
16			Form of Assessment : Test				30%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	50%
2.	Test	50%
		100%

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.