	Universitas Negeri Surabaya Faculty of Economics and Business Bachelor of Economics Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Economic Statistics 2	8722003016		T=3	P=0	ECTS=4.77	3	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Dr. Tony Seno Aji, S.E., M.E.

Learning model	**Project Based Learning**
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 contains understanding of inferential statistics; probability; Sampling and sampling distribution; statistical estimation; hypothesis testing; Analysis of Variance; Chi Square Test; non-parametric statistics. By studying this subject, students are able to make appropriate decisions in the context of solving problems in their field of expertise, based on the results of information and data analysis.
References	**Main :**
	1. Supangat, A. 2007. Statistika. Penerbit Kencana: Jakarta. Algifari. 2003. Staistik Induktif.Penerbit UPP AMP YKPN: Yogyakarta Atmaja, L.S.. 2009. Statistika untuk Bisnis dan Ekonomi. Penerbit Andi: Yogyakarta Sugiyono. 2016. Statistika untuk Penelitian. Penerbit Alfabeta: Bandung.
	Supporters:
Supporting lecturer	Dr. Lucky Rachmawati, S.E., M.Si. Rachma Indrarini, S.EI., M.SEI.

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	Students understand the scope of inferential statistics material	Students are able to understand the scope of inferential statistics material	**Criteria:** Students can trace back (cognitive) memory regarding basic statistical concepts	Discussion Lecture 3 X 50			0%
2	Students are able to understand probability	1. Students are able to understand the meaning of Probability 2. Students are able to understand the probability value of an event 3. Students are able to calculate and determine probability values 4. Students are able to understand various types of probability		Discussion Lecture 3 X 50			0%
3	Students are able to understand sampling and sampling distribution	1. Students are able to understand the meaning of Sampling Distribution 2. Students are able to understand sample probability 3. Students are able to understand Sample Probability 4. Students are able to understand the sampling distribution of the mean 5. Students are able to understand sampling distribution from proportion 6. Students are able to understand the sampling distribution of differences and additions		Discussion Lecture 3 X 50			0%

4	Students are able to understand and analyze statistical estimates	1. Students are able to understand and analyze the meaning and basic concepts of estimation 2. Students are able to understand and analyze Population Mean estimates 3. Students are able to understand and analyze population percentage estimates 4. Students are able to understand and analyze Population Variance estimates		Discussion Lecture 3 X 50			0%

5	Students are able to study, apply and analyze hypothesis testing	1. Students are able to understand the meaning of Hypothesis 2. Students are able to understand the formulation of Hypothesis 3. Students are able to understand the general steps in Hypothesis Testing 4. Students are able to understand and analyze hypothesis testing regarding the mean with a large sample (n≥30) 5. Students are able to understand and analyzing hypothesis tests regarding means with small samples (n<30) 6. Students are able to understand and analyze hypothesis tests regarding proportions 7. Students are able to understand and analyze hypothesis tests for differences between two means with large samples (n1; n2 ≥30) 8. Students able to understand and analyze the Two Mean Difference Hypothesis test with a Small Sample (n1; n2 < 30) 9. Students are able to understand and analyze the Two Mean Difference Hypothesis test for Paired Observations 10. Students are able to understand and analyze the Two Proportion Difference Hypothesis test		Discussion Lecture 3 X 50			0%

6	Students are able to study, apply and analyze hypothesis testing	1. Students are able to understand the meaning of Hypothesis 2. Students are able to understand the formulation of Hypothesis 3. Students are able to understand the general steps in Hypothesis Testing 4. Students are able to understand and analyze hypothesis testing regarding the mean with a large sample (n≥30) 5. Students are able to understand and analyzing hypothesis tests regarding means with small samples (n<30) 6. Students are able to understand and analyze hypothesis tests regarding proportions 7. Students are able to understand and analyze hypothesis tests for differences between two means with large samples (n1; n2 ≥30) 8. Students able to understand and analyze the Two Mean Difference Hypothesis test with a Small Sample (n1; n2 < 30) 9. Students are able to understand and analyze the Two Mean Difference Hypothesis test for Paired Observations 10. Students are able to understand and analyze the Two Proportion Difference Hypothesis test		Discussion Lecture 3 X 50			0%

7	Students are able to study, apply and analyze hypothesis testing	1. Students are able to understand the meaning of Hypothesis 2. Students are able to understand the formulation of Hypothesis 3. Students are able to understand the general steps in Hypothesis Testing 4. Students are able to understand and analyze hypothesis testing regarding the mean with a large sample (n≥30) 5. Students are able to understand and analyzing hypothesis tests regarding means with small samples (n<30) 6. Students are able to understand and analyze hypothesis tests regarding proportions 7. Students are able to understand and analyze hypothesis tests for differences between two means with large samples (n1; n2 ≥30) 8. Students able to understand and analyze the Two Mean Difference Hypothesis test with a Small Sample (n1; n2 < 30) 9. Students are able to understand and analyze the Two Mean Difference Hypothesis test for Paired Observations 10. Students are able to understand and analyze the Two Proportion Difference Hypothesis test		Discussion Lecture 3 X 50			0%
8	UTS	UTS		3 X 50			0%

9	Students are able to understand and analyze Variance Analysis	1. Students are able to understand the meaning of Variance Analysis 2. Students are able to understand and analyze One Way Anova 3. Students are able to understand and analyze two-way Anova		Discussion Lecture 3 X 50			0%
10	Students are able to understand and analyze Variance Analysis	1. Students are able to understand the meaning of Variance Analysis 2. Students are able to understand and analyze One Way Anova 3. Students are able to understand and analyze two-way Anova		Discussion Lecture 3 X 50			0%
11	Students are able to understand and analyze the Chi Square Test	1. Students are able to understand the meaning of the Chi Square test 2. Students are able to calculate, understand and analyze Chi Square values		Discussion Lecture 3 X 50			0%
12	Students are able to understand and analyze the Chi Square Test	1. Students are able to understand the meaning of the Chi Square test 2. Students are able to calculate, understand and analyze Chi Square values		Discussion Lecture 3 X 50			0%

13	Students are able to understand and analyze other non-parametric statistics	1. Students are able to understand and analyze the Mann-Whitney test 2. Students are able to understand and analyze the Wilcoxon test 3. Students are able to understand and analyze the Friedman test 4. Students are able to understand and analyze the Kruskal-Wallis test		Discussion Lecture 3 X 50			0%
14	Students are able to understand and analyze other non-parametric statistics	1. Students are able to understand and analyze the Mann-Whitney test 2. Students are able to understand and analyze the Wilcoxon test 3. Students are able to understand and analyze the Friedman test 4. Students are able to understand and analyze the Kruskal-Wallis test		Discussion Lecture 3 X 50			0%

15	Students are able to understand and analyze other non-parametric statistics	1. Students are able to understand and analyze the Mann-Whitney test 2. Students are able to understand and analyze the Wilcoxon test 3. Students are able to understand and analyze the Friedman test 4. Students are able to understand and analyze the Kruskal-Wallis test		Discussion Lecture 3 X 50			0%
16	UAS	UAS		3 X 50			0%

Evaluation Percentage Recap: Project Based Learning

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.