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

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Research Statistics	8720902132	Compulsory Study Program	T=2	P=0	ECTS=3.18	4	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	Han Tantri Hardini, S.Pd., M.Pd dan Dr. Agung Listiadi, S.Pd, M.Ak	Dr. Agung Listiadi, S.Pd. M.Ak	Rochmawati, S.Pd., M.Ak.

Learning model	Case Studies

Program Learning Outcomes (PLO)

PLO study program that is charged to the course

Program Objectives (PO)

PO - 1	Able to utilize science and technology in analyzing advanced research statistical activities

PLO-PO Matrix

P.O
PO-1

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
PO-1																

Short Course Description	This research statistics course discusses parametric statistics in the discussion of comparative statistics, factor analysis and non-parametric statistics. Lectures are carried out using a system of discussions, project assignments and reflection.

References

Main :

1. Algifari. 2000. AnalisisRegresi. Yogyakarta : YKPNIrianto, Agus. 2004. Statistik,Konsep Dasar & Aplikasinya. Jakarta : Prenada MediaSudjana. 2003. TeknikAnalisis Regresi dan Korelasi.Bandung : TarsitoSugiono. 2010. StatistikUntuk Penelitian. Bandung. AlfabetaSupangat, Andi. 2004. StatistikaDalam Kajian Deskriptif Inferensi dan Nonparametrik. Jakarta: Prenada MediaSupranto. 2004. AnalisisMultivariat. Jakarta : Rineka Cipta.

Supporters:

1. Listiadi, Agung, Eko Wahjudi, Luqman Hakim, dan Han Tantri Hardini. 2021. Modul Statistik Deskriptif

Supporting lecturer	Dr. Agung Listiadi, S.Pd., M.Ak. Han Tantri Hardini, 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	Able to understand the basic concepts of statistics and describe a general description of the subject of statistics and its applications	1. Explain the meaning and definition of statistics 2. Define the meaning of population and sample 3. Describe the logical framework of statistical thinking 4. Distinguish between qualitative data and quantitative data 5. Distinguish between observational and experimental data 6. Distinguish between primary data and secondary data7. Explain discrete variables and continuous variables8. Distinguish between descriptive statistics and inductive statistics	**Criteria:** Students can trace back (cognitive) memory regarding basic statistical concepts **Form of Assessment** : Participatory Activities	Lectures, Discussions, Demonstrations 2 X 50		**Material:** Research Statistics **Library:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.* **Material:** Descriptive Statistics **Literature:** *Listiadi, Agung, Eko Wahjudi, Luqman Hakim, and Han Tantri Hardini. 2021. Descriptive Statistics Module*	3%
2	Able to explain and understand statistical estimation theory	1. explain point estimation of statistical parameters2. Understand interval estimation3. Calculate the standard error of the sample arithmetic mean4. Calculating confidence intervals 5. Calculate the confidence interval for the mean6. Calculating confidence intervals for proportions7. Choose a sample size	**Criteria:** Maximum score is 100, if you do all the questions correctly **Form of Assessment** : Participatory Activities, Practice/Performance	Lectures, Discussions, Demonstrations, Questions and Answers 2 X 50		**Material:** Parametric and Non-Parametric Statistics **Library:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.* **Material:** Descriptive Statistics **Literature:** *Listiadi, Agung, Eko Wahjudi, Luqman Hakim, and Han Tantri Hardini. 2021. Descriptive Statistics Module*	3%

3	Able to understand and explain hypothesis testing	1. Understand large sample hypothesis testing2. Understand and understand the meaning of the hypothesis 3. Understand and be able to carry out hypothesis testing using correct procedures 4. Understand and understand significance tests 5. Know and be able to carry out large sample hypothesis testing both for average values and proportions and differences between averages and proportions 6. Know and be able to carry out large sample tests both for differences in average values and proportions 7. Understand and know about types I and II errors 8. Know and understand small sample hypothesis testing 9. Understanding and comprehending small samples and characteristics of student distributions 10. Understand and carry out hypothesis testing for small sample average values 11. Understand and be able to carry out hypothesis testing for differences in small sample averages 12. Understand and be able to carry out hypothesis testing for paired data	**Criteria:** Maximum score is 100, if you do all the questions correctly **Form of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Lectures, Discussions, Demonstrations, Questions and Answers, Giving Assignments, Groups of 2 X 50		**Material:** Descriptive Statistics **Literature:** *Listiadi, Agung, Eko Wahjudi, Luqman Hakim, and Han Tantri Hardini. 2021. Descriptive Statistics Module* **Material:** Research Hypothesis **Literature:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.*	3%

4	Able to understand and explain hypothesis testing	1. Understand large sample hypothesis testing 2. Understand and interpret the hypothesis 3. Understand and be able to carry out hypothesis testing using correct procedures 4. Understand and comprehend the i5 significance test. Know and be able to carry out large sample hypothesis testing both for mean values and proportions and mean differences and proportions 6. Know and be able to carry out large sample tests both for differences in average values and proportions 7. Understand and know about types I and II errors 8. Know and understand small sample hypothesis testing 9. Understanding and comprehending small samples and characteristics of student distributions 10. Understand and carry out hypothesis testing for small sample average values 11. Understand and be able to carry out hypothesis testing for differences in small sample averages 12. Understand and be able to carry out hypothesis testing for paired data	**Criteria:** Maximum score is 100, if you do all the questions correctly **Form of Assessment** : Participatory Activities, Practice/Performance	Cooperative Learning, Project based learning (PjBL) (2 x 50 minutes) 2 X 50		**Material:** Research Hypothesis **Literature:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.* **Material:** Descriptive Statistics **Literature:** *Listiadi, Agung, Eko Wahjudi, Luqman Hakim, and Han Tantri Hardini. 2021. Descriptive Statistics Module*	3%
5	Able to understand and explain Multiple Correlation Type Analysis	1. Able to understand multiple correlation type analysis 2. Able to apply multiple correlations into SPSS	**Criteria:** Maximum score is 100, if you do all the questions correctly **Form of Assessment** : Participatory Activities	Cooperative Learning, Project based learning (PjBL) (2 x 2 x 50 minutes) 2 X 50		**Material:** Correlation **Literature:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.*	3%

6	Able to understand and explain Regression Analysis	1. Able to understand Simple Regression Analysis 2. Able to practice Simple Regression in SPSS	**Criteria:** Maximum score is 100, if you do all the questions correctly **Form of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Cooperative Learning, Project based learning (PjBL) (2 x 2 x 50 minutes) 2 X 50		**Material:** Multiple Regression Analysis **Library:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.*	5%
7	Able to understand and explain Regression Analysis	1. Able to understand Multiple Regression Analysis 2. Able to practice Multiple Regression in SPSS	**Criteria:** Maximum score is 100, if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance	Cooperative Learning, Project based learning (PjBL) (2 x 2 x 50 minutes) 2 X 50		**Material:** Multiple Regression Analysis **Library:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.*	5%

8	UTS	understand all meeting material 1-7	**Criteria:** 1. Maximum score is 100, if you do all the questions correctly 2. Value 0 if participant does not take part in UTS **Form of Assessment** : Test	2 X 50		**Material:** hypothesis, regression, correlation, **bibliography:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada Media Sudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.*	20%
9	Understand Comparative statistical methods	1. Able to understand research problems using comparative statistical methods: One Sample Test, Two Sample Test, Independent Sample Test, Analysis of Variance, Factorial Analysis of Variance, Multivariate Analysis of Variance 2. Able to calculate and analyze research problems using comparative statistical methods: One Sample Test, Two Sample Test, Independent Sample Test, Analysis of Variance, Factorial Analysis of Variance, Multivariate Analysis of Variance	**Criteria:** Maximum score is 100, if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practical Assessment	Cooperative Learning, Project based learning (PjBL) (2 x 50 minutes) 2 X 50		**Material:** Comparative Statistics **Bibliography:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada Media Sudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.*	2%

10	Understand Comparative statistical methods	1. Able to understand research problems using comparative statistical methods: One Sample Test, Two Sample Test, Independent Sample Test, Analysis of Variance, Factorial Analysis of Variance, Multivariate Analysis of Variance 2. Able to calculate and analyze research problems using comparative statistical methods: One Sample Test, Two Sample Test, Independent Sample Test, Analysis of Variance, Factorial Analysis of Variance, Multivariate Analysis of Variance	**Criteria:** Maximum score is 100, if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practical Assessment	Project based learning (PjBL) 2 X 50		**Material:** Comparative Statistics **Bibliography:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada Media Sudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.* **Material:** Comparative Statistics **Literature:** *Listiadi, Agung, Eko Wahjudi, Luqman Hakim, and Han Tantri Hardini. 2021. Descriptive Statistics Module*	5%
11	Able to understand and carry out research methods using factor analysis in research	1. Able to understand the concept of factor analysis. 2. Able to incorporate data processing into factor analysis applications. 3. Able to analyze the results of data processing using factor analysis	**Criteria:** Maximum score is 100, if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance	Project based learning (PjBL)(2x50 minutes)		**Material:** Factor Analysis **Literature:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.* **Material:** Descriptive Statistics **Literature:** *Listiadi, Agung, Eko Wahjudi, Luqman Hakim, and Han Tantri Hardini. 2021. Descriptive Statistics Module*	3%

12	Able to understand and carry out research methods using factor analysis in research	1. Able to understand the concept of factor analysis. 2. Able to incorporate data processing into factor analysis applications. 3. Able to analyze the results of data processing using factor analysis	**Criteria:** Maximum score is 100, if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance	Project based learning (PjBL)(2x50 minutes)		**Material:** Factor Analysis **Literature:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.*	2%
13	Able to understand and carry out research methods using factor analysis in research	1. Able to understand the concept of factor analysis. 2. Able to incorporate data processing into factor analysis applications. 3. Able to analyze the results of data processing using factor analysis	**Criteria:** Maximum score is 100, if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance	Project based learning (PjBL)(2x50 minutes)		**Material:** Factor Analysis **Literature:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.*	4%

14	1. Able to understand the concept and apply non-parametric statistics in research data analysis	1. Understand the concept of non-parametric statistics 2. Able to enter data processing into the SPSS application for non-parametric statistics: Chi Square, Runs Test, Mann Whitney, Wilxoson Test, Friedman Test, Spearman Rank. 3. Able to analyze the results of non-parametric statistical data processing	**Criteria:** Maximum score is 100, if you do all the questions correctly **Form of Assessment** : Participatory Activities	Project based learning (PjBL)(1 x 2 x 50 minutes) 2 X 50		**Material:** Non-Parametric Statistics **Library:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.* **Material:** Descriptive Statistics **Literature:** *Listiadi, Agung, Eko Wahjudi, Luqman Hakim, and Han Tantri Hardini. 2021. Descriptive Statistics Module*	3%
15	1. Able to understand the concept and apply non-parametric statistics in research data analysis	1. Understand the concept of non-parametric statistics 2. Able to enter data processing into the SPSS application for non-parametric statistics: Chi Square, Runs Test, Mann Whitney, Wilxoson Test, Friedman Test, Spearman Rank. 3. Able to analyze the results of non-parametric statistical data processing	**Criteria:** Maximum score is 100, if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practical Assessment	Project based learning (PjBL)(1 x 2 x 50 minutes) 2 X 50		**Material:** Non-Parametric Statistics **Library:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.*	5%

16	UAS	1. Able to understand and analyze research methods using parametric statistics using comparative statistical analysis 2. Able to understand and carry out research methods using factor analysis in research 3. Able to understand and analyze research methods using non-parametric statistics	**Criteria:** 1. Maximum score is 100, if you do all UAS questions correctly 2. Score 0 if you do not take the UAS **Form of Assessment** : Test	Offline UAS Test Method 2 X 50		**Material:** Parametric Statistics, Factor Analysis, Non-Parametric Statistics **Library:** *Algifari. 2000. Regression Analysis. Yogyakarta : YKPNIrianto, Agus. 2004. Statistics, Basic Concepts & Applications. Jakarta : Prenada MediaSudjana. 2003. Regression and Correlation Analysis Techniques. Bandung: TarsitoSugiono. 2010. Statistics for Research. Bandung. AlphabetaSupangat, Andi. 2004. Statistics in Descriptive Inference and Nonparametric Studies. Jakarta: Prenada Media Supranto. 2004. Multivariate Analysis. Jakarta : Rineka Cipta.*	30%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	24.68%
2.	Project Results Assessment / Product Assessment	12.68%
3.	Practical Assessment	4.01%
4.	Practice / Performance	7.67%
5.	Test	50%
		99.04%

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** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities 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.