SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Economic and Business Statistics	8722007109	Compulsory Study Program Subjects	**T=1**	**P=2**	**ECTS=4.77**	3	January 9, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
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Learning model	**Project Based Learning**

Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**	
	PLO-4	Develop yourself continuously and collaborate.
	PLO-5	Able to analyze overall economic theoretical concepts
	PLO-8	Able to apply information technology in problem solving
	PLO-9	Able to make decisions based on analysis of information and data in the fields of development planning, monetary economics and public economics
	Program Objectives (PO)	
	PO - 1	Students are able to master the basic concepts of research statistics in depth and formulate them in procedural problem solving
	PO - 2	Students are able to be responsible for informing the results of information and data analysis both orally and in writing through presenting individual assignments or the results of group work within the scope of statistics
	PLO-PO Matrix	

P.O	PLO-4	PLO-5	PLO-8	PLO-9
PO-1	✔	✔	✔	✔
PO-2	✔	✔	✔	✔

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	✔	✔	✔	✔	✔	✔	✔		✔	✔	✔	✔	✔	✔	✔	
PO-2								✔								✔

Short Course Description	This course discusses the meaning of descriptive statistics; Data and the process of collecting it; Central symptom measurement; measurement of location symptoms; dispersion measurements; The degree of slope and degree of sharpness of the curve; Presentation of data in tabular and graphical form; Values Summaries of numeric data Present categorical data in graphs and tables; index number; trend analysis. Lectures are carried out using a collaborative approach (lectures, discussions and individual and group assignments).

References	**Main :**

1. Boedijoewono, Noegroho. 2014.Pengantar Statistika Ekonomi dan Bisnis 1: Deskriptif. UPP STIM YKPN
2. Lind, Douglas A. Marchal, William G. and Wathen, Samuel A. 2016. Statistical Techniques in Business and Economics, 16th Edition. McGraw-Hill Education
3. Subagyo, Pangestu. 2012.Statistika Deskriptif. Yogyakarta:BPFE.
4. Supranto, J. 2009.Statistik : Teori dan Aplikasi. Jilid 1 (cetakan 7). Jakarta : Erlangga
5. Suharyadi & Purwanto, SK. 2015.Statistika untuk Ekonomi & Keuangan Modern(ed 3). Jilid 1.Jakarta: Salemba Empat

Supporters:

Supporting lecturer	Dr. Prayudi Setiawan Prabowo, S.E., M.E. Aprillia Nilasari, S.Pd., M.S.E. Ruth Eviana Hutabarat, S.E., M.E. Nurul Hanifa, S.E., M.Si. Kukuh Arisetyawan, S.Pd., M.E. Aminudin Ma'ruf, M.Sc. Wenny Restikasari, S.E., M.S.E.

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	Formulate the meaning and function of statistics	1.1 Able to understand the meaning of statistics 1.2. Able to understand types of statistics 1.3. Able to understand types of data in statistics	**Criteria:** according to scoring guidelines **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Interactive discussions and lectures 3 X 50	Interactive discussions and lectures	**Material:** 1. Understanding statistics 2. Types of statistics 3. Data in statistics **References:** *Boedijoewono, Noegroho. 2014.Introduction to Economic and Business Statistics 1: Descriptive. UPP STIM YKPN*	0%
2	Compile data frequency distribution tables and two-way tables	2.1. Able to compile a frequency distribution table 2.2. Able to create two-way tables	**Criteria:** according to scoring guidelines **Form of Assessment** : Participatory Activities	Interactive discussions and lectures 3 X 50	Interactive discussions and lectures	**Material:** 1. Frequency distribution table 2. Two-way table **References:** *Boedijoewono, Noegroho. 2014.Introduction to Economic and Business Statistics 1: Descriptive. UPP STIM YKPN*	0%
3	Describe various kinds of diagrams	3.1. Able to describe diagrams: histogram, bargraph, piechart, polygon, ogive, pictogram	**Criteria:** according to scoring guidelines **Form of Assessment** : Participatory Activities	Interactive discussions and lectures 3 X 50	Interactive discussions and lectures	**Material:** 1. Several diagrams in statistics: Histogram, Bargraph, Piechart, Polygon, Ogive, Pictogram **Library:** *Boedijoewono, Noegroho. 2014.Introduction to Economic and Business Statistics 1: Descriptive. UPP STIM YKPN*	0%
4	Analyze measures of central tendency of data	4.1. Able to calculate and analyze mean, median, mode for grouped data 5.1. Able to calculate and analyze mean, median, mode for ungrouped data	**Criteria:** according to scoring guidelines **Form of Assessment** : Assessment of Project Results / Product Assessment, Practices / Performance	Interactive discussions and lectures 3 X 50	Interactive discussions and lectures	**Material:** Measures of central tendency (mean, median, mode) for grouped and ungrouped data **References:** *Boedijoewono, Noegroho. 2014.Introduction to Economic and Business Statistics 1: Descriptive. UPP STIM YKPN*	0%

5	Analyze measures of central tendency of data	4.1. Able to calculate and analyze mean, median, mode for grouped data 5.1. Able to calculate and analyze mean, median, mode for ungrouped data	**Criteria:** according to scoring guidelines **Form of Assessment** : Assessment of Project Results / Product Assessment, Practices / Performance	Interactive discussions and lectures 3 X 50		**Material:** Measures of central tendency (mean, median, mode) for grouped and ungrouped data **References:** *Boedijoewono, Noegroho. 2014.Introduction to Economic and Business Statistics 1: Descriptive. UPP STIM YKPN*	0%
6	Analyze measures of data dispersion	6.1. Able to calculate: Percentile, Decile, Quartile, Range, Quartile Range, Semi-quartile Range 7.1. Able to calculate and analyze Z score, Standard error, Qualitative Variation Index, Standard deviation and Variance	**Criteria:** according to scoring guidelines **Form of Assessment** : Participatory Activities	Closed quiz 3 X 50	Quiz closed	**Material:** Measures of data dispersion: Percentiles, Deciles, Quartiles, Range, Quartile range, Semi-quartile range **References:** *Suharyadi & Purwanto, SK. 2015. Statistics for Modern Economics & Finance (ed 3). Volume 1. Jakarta: Salemba Empat*	20%
7	Analyze measures of data dispersion	6.1. Able to calculate: Percentile, Decile, Quartile, Range, Quartile Range, Semi-quartile Range 7.1. Able to calculate and analyze Z score, Standard error, Qualitative Variation Index, Standard deviation and Variance	**Criteria:** according to scoring guidelines **Form of Assessment** : Participatory Activities	Discussion of the results of the 3 X 50 project planning	Discussion of project planning results	**Material:** Measures of data dispersion: Z score, Standard error, Qualitative Variation Index, Standard deviation and Variance **Literature:** **Material:** Measures of data dispersion: Z score, Standard error, Qualitative Variation Index, Standard deviation and Variance **Literature:** *Supranto, J. 2009. Statistics: Theory and Applications. Volume 1 (printing 7). Jakarta : Erlangga*	5%
8	UTS	UTS	**Criteria:** according to scoring guidelines **Form of Assessment** : Test	UTS 3 X 50	UTS	**Material:** all material in meetings 1 to 7 **References:**	20%

9	Analyzing the shape of a normal curve (Abdul Rozak)	9.1 Able to calculate measurements: Curvature, Kurtosis, Normal curve area	**Criteria:** according to scoring guidelines **Form of Assessment** : Project Results Assessment / Product Assessment	Interactive discussions and lectures 3 X 50	Interactive discussions and lectures	**Material:** Measures of the slope of the data frequency distribution curve including Slope, Kurtosis (peakness), Normal curve area. **Reference:** *Supranto, J. 2009. Statistics: Theory and Applications. Volume 1 (printing 7). Jakarta : Erlangga*	0%
10	Analyzing parameter estimates	10.1. Able to calculate and analyze normal distribution probabilities 11. 1. Able to calculate estimates of average and variance parameters for a population 12.1. Able to calculate estimates of average and variance parameters for two populations	**Criteria:** according to scoring guidelines **Form of Assessment** : Project Results Assessment / Product Assessment	Interactive discussions and lectures 3 X 50	Interactive discussions and lectures	**Material:** Normal distribution probability **Reference:** *Suharyadi & Purwanto, SK. 2015. Statistics for Modern Economics & Finance (ed 3). Volume 1. Jakarta: Salemba Empat*	0%
11	Analyzing parameter estimates	10.1. Able to calculate and analyze normal distribution probabilities 11. 1. Able to calculate estimates of average and variance parameters for a population 12.1. Able to calculate estimates of average and variance parameters for two populations	**Criteria:** according to scoring guidelines **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Interactive discussions and lectures 3 X 50		**Material:** Parameter estimation for a population (average and variance) **References:** *Suharyadi & Purwanto, SK. 2015. Statistics for Modern Economics & Finance (ed 3). Volume 1. Jakarta: Salemba Empat*	0%
12	Analyzing parameter estimates	10.1. Able to calculate and analyze normal distribution probabilities 11. 1. Able to calculate estimates of average and variance parameters for a population 12.1. Able to calculate estimates of average and variance parameters for two populations	**Criteria:** according to scoring guidelines **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Interactive discussions and lectures 3 X 50	Interactive discussions and lectures	**Material:** parameter estimation for two populations (mean and variance) **References:** *Suharyadi & Purwanto, SK. 2015. Statistics for Modern Economics & Finance (ed 3). Volume 1. Jakarta: Salemba Empat*	0%
13	Analyzing various types of index numbers (Abdul Rozak, J. Supranto, Pangestu)	13.1. Able to calculate single index, aggregate index, average index, weighted average index	**Criteria:** according to scoring guidelines **Form of Assessment** : Participatory Activities	Interactive discussions and lectures 3 X 50	Interactive discussions and lectures	**Material:** Index numbers **References:** *Subagyo, Pangestu. 2012. Descriptive Statistics. Yogyakarta: BPFE.*	0%

14	Analyzing time series / trends (Pangestu, J. Supramto,)	14.1. Able to compile and analyze linear trend equations 15. 1. Able to compile and analyze non-linear trend equations 16.1. Able to compile and analyze seasonal trends	**Criteria:** according to scoring guidelines **Form of Assessment** : Participatory Activities	3 X 50 Material Comprehension Quiz	Material Understanding Quiz	**Material:** Linear trends **References:** *Lind, Douglas A. Marchal, William G. and Wathen, Samuel A. 2016. Statistical Techniques in Business and Economics, 16th Edition. McGraw-Hill Education*	20%
15	Analyzing time series / trends (Pangestu, J. Supramto,)	14.1. Able to compile and analyze linear trend equations 15. 1. Able to compile and analyze non-linear trend equations 16.1. Able to compile and analyze seasonal trends	**Criteria:** according to scoring guidelines **Form of Assessment** : Participatory Activities	Interactive discussions and lectures 3 X 50	Interactive discussions and lectures	**Material:** 1. Non-linear trends 2. Seasonal trends **References:** *Lind, Douglas A. Marchal, William G. and Wathen, Samuel A. 2016. Statistical Techniques in Business and Economics, 16th Edition. McGraw-Hill Education*	5%
16	UAS	UAS	**Criteria:** according to scoring guidelines **Form of Assessment** : Test	Final UAS 3 X 50 test		**Material:** all material at meetings 9 to 15 **References:**	30%

Evaluation Percentage Recap: Project Based Learning

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

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.