UNIVERSITY OF BRAWIJAYAFACULTY OF ADMINISTRATIVE SCIENCESDEPARTMENT OF BUSINESS ADMINISTRATION

SEMESTER LEARNING PLAN

SUBJECT	CODE	COURSE CLUBS	WEIGHT (credits)	SEMESTER	Date of Compilation
Statistics	PAR60002	COMPULSORY COURSES	3	2	07-20-2023

AUTHORIZATION	RPS Developer Lecturer	RMK Coordinator	Head of Study Program
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Learning Outcomes	CPL PROGRAM	
	CPL2	Students are able to produce critical and innovative thinking to support business decision making in tourism sector
	CPL3	Students are able to produce scientific studies to answer current issues in the tourism sector.
	CPL6	Students are able to implement science and technology in solving tourism problems.
	CP – MK	
	After taking this course, students are able to	
	CPMK1	Know, understand and comprehend statistical concepts used in the tourism sector (CPL 2, CPL3)
	CPMK2	Can apply the concept to case situations and problems that require decisions based on quantitative information (CPL 2, CPL 3)
	CPMK3	Able to describe and communicate a conclusion through statistical knowledge possessed and implement it into a statistical program. (CPL 2, CPL 3, CPL 6)

CPMK-CPL Weight Mapping

	CPL1	CPL2	CPL3	CPL4	CPL5	CPL6
CPMK1	0	0.8	0.2	0	0	0
CPMK2	0	0.4	0.6	0	0	0
CPMK3	0	0.2	0.2	0	0	0.6

MK Brief Description	In this course, students learn basic knowledge of statistics, including how to collect data, present data well, organize and group data, measure data centralization, measure data uniformity, index numbers to be applied in business and economic cases.	
Material Learning / Subject	1. Collection, Data Processing and Data Presentation 2. Sizecentralization 3. SizeDispersion 4. Skewness and Kurtosis 5. Association and Correlation 6. Prediction 7. Probability 8. Distribution Binomial and Poison 9. DistributionNormal 10. Estimate 11. Hypothesis Testing 12. Regression and Correlation 13. Anova 14. Non-Parametric Statistics	
Library	**Main**	
	1. Suharyadi and Purwanto, (2016) Statistics for Modern Economics and Finance, Books 1 and 2, Salemba Empat, Jakarta.	

	2. Siagian, Dergibson, and Sugianto, (2004) Statistical Methods for Economics and Business, Gramedia Pustaka Utama, Jakarta **3.** Dayan Anto, (1995) "Introduction to Statistical Methods", Volumes 1 and 2, LP3ES, XVIII Printing, Jakarta.	
	Supporters	
	1. Douglas A. Lind, William G. Marchal, Samuel A. Wathen (2003), Basic Statistics For Business and Economics, McGraw Hill. 2. Ken Black, (2013), Applied Business Statistics, John Willey & Sons. 3. Noegroho Boedijowono, (2007), Introduction to Economic and Business Statistics, Fifth Edition, UPP AMP YKPN. 4. McClave. James T., P. George Benson, Terry Sincich (2008), Statistics for Business and Economics, 10th ed. Pearson Prentice Hall. 5. Mulyono Sri, (2003), Statistics for Economics, LPFEUI	
Instructional Media	**Software :**	**Hardware:**
	Gmeet, Zoom, GCR, VLM	LCD and Projector
Team Teaching	▪ Dr. Dra. Maria Goretti Wi Endang NP,, M.Sc ▪ Dr. Ari Darmawan, SAB, MAB	
Course Requirements	-	

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lectures / Assignments / other forms of learning)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
1	Able to understand and explain material about: Data Collection, Data Processing and Data Presentation	Accuracy,Completeness and correctness in: a. explain data b. explaindata collection	Criteria: understandingabout: 1) data, 2) data collection, 3) data matrix, 4) frequency tables and graphs.	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	a. Introduction **b.** Global overview of course materials and Study Contract **c.** Explanation of the material : Collection,	5%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		c. explain and create a data matrix d. explain and create frequency tables and graphs.	Non-test form: ● Task ● Activeness in class			Data Processing and Data Presentation	
2	Able to understand, calculate and explain: Measure of centralization	Accuracy,Completeness and correctness in: a. calculate and explain the measure of central tendency (measure of central tendency) to calculate mode, median, mean. b. calculate and explain the measures of position to calculate quartiles, deciles, percentiles.	Criteria:understanding and accuracy of: a. measures of central tendency (measures of central tendency) to calculate mode, median, mean. b. measures of position for calculating quartiles, deciles, percentiles. Non-test form:	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Centralization size	7%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
			• Task • Activeness in class				
3	Able to understand, calculate and explain: Dispersion Measures	Accuracy,Completeness and correctness in: a. calculate and explain range b. calculate and explain mean deviation c. calculate and explain standard deviation d. calculate and explain variance e. calculate and explain the coefficient of variance	Criteria:understanding and accuracy of the range, mean deviation, standard deviation, variance, coefficient of variance Non-test form: • Task • Activeness in class	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Dispersion Measure	7%
4	Able to understand, calculate and explain: Skewness and Kurtosis	Accuracy,Completeness and correctness in: calculating and explaining	Criteria:understanding and accuracy of pearson, quartiles, percentiles,	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Skewness and Kurtosis	7%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		pearson, quartile, percentile, for grouped and un-grouped data.	for grouped and un-grouped data Non-test form: ● Task ● Activeness in class				
5	Able to understand, calculate and explain: Association and Correlation .	Accuracy,Completeness and correctness in: calculating and explaining association and correlation relationships.	Criteria:understanding and accuracy of associations for nominal scale variables and correlations for ordinal, interval, and ratio scale variables Non-test form: ● *Case base* ● Activeness in class	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Association and Correlation	7%
6	Able to understand, calculate and explain: Prediction	Accuracy,completeness and correctness in: a. Calculate and explain the linear trend have a form	Criteria:understanding and accuracy of a. Linear trend which has the form of a line equation	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Prediction	7%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		straight line equation with existing methods b. Calculate and explain the mean growth based on the number of years using the existing formula. c. Calculating and explaining simple linear regression	straight with existing methods b. Mean growth based on the number of years with the existing formula. c. Simple linear regression from X to Y and regression from Y to X Non-test form: ● Task ● Activeness in class				
7	Able to understand, calculate and explain: Probability	Accuracy,completeness and correctness in: a. Calculating and explaining probability from three different approaches.	Criteria:understanding and accuracy of a. Probabilitysee n from three kinds of approaches. b. Probability a number of	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Probability	7%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		b. Calculate and explain the probability of several events using existing formulas. c. Calculating and explaining the probability of independent and dependent events, which can be divided into 3 types, namely marginal, combined and conditional probability.	events withexisting formula. c. Probability of eventsindependent and dependent which can be divided into 3 types, namely marginal, combined and conditional probability Non-test form: ● Task ● Activeness in class				
8	**UTS**						
9	Able to understand, calculate and explain: Binomial distribution and Poisson distribution.	Accuracy,Completeness and correctness in: a. Calculate and explain	Criteria:understanding and accuracy in calculating and explaining:	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Binomial and Poison Distributions	7%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		binomial distribution. b. Explain characteristics of binomial distribution. c. Calculate and explain the mean, variance, and standard deviation of the binomial distribution using formulas. d. Explain characteristics of the Poisson distribution. e. Differentiatebinomial distribution with poisson distribution. f. Calculating and explaining the binomial distribution with use	a. Binomial distribution. b. Characteristics of binomial distribution. c. mean, variance, and standard deviation of binomial distribution with formula. d. characteristics of the Poisson distribution. e. Distribution differencesbinomial with poisson distribution. f. binomial using the poisson probability formula cumulative.				

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		cumulative poisson probability formula. g. Calculate and explain the average value, variance and standard deviation of the Poisson distribution using formulas.	g. Calculate and explain the average value, variance and standard deviation of the Poisson distribution using formulas. Non-test form: ● Task ● Activeness in class				
10	Able to understand, calculate and explain: Normal distribution.	Accuracy,Completeness and correctness in: a. Calculating and explaining the normal distribution. b. Explain characteristics of normal distribution. c. Calculate and explain the standard normal distribution and normal curve	Criteria:understanding and accuracy in calculating and explaining: a. normal distribution. b. characteristics of normal distribution. c. standard normal distribution and standard normal curve with	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Normal Distribution	7%

			formula.				

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		standard with formula. d. Explain the relationship between normal distribution and binomial distribution. e. Explain the differences between binomial, Poisson and normal-binomial distributions.	d. the relationship between the normal distribution and the binomial distribution. e. differences between binomial, Poisson and χ distributions normal-binomial. Non-test form: ● Task ● Activeness in class				

11	Able to understand, calculate and explain: Estimation	Accuracy,Completeness and correctness in: a. Explain characteristics of a good estimator. b. Explainestimating the average parameter value and proportion.	Criteria:understanding and accuracy in calculating and explaining: a. characteristics of a good estimator. b. estimation of average parameter prices and proportion.	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Estimate	8%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		c. Calculating and explaining the estimation of interval differences between two means and differences between two proportions.	c. estimationinterval difference of two means and difference of two proportions Non-test form: ● Task ● Activeness in class				
12	Able to understand, calculate and explain: Hypothesis testing	Accuracy,Completeness and correctness in: a. Explaining the hypothesis b. Explainerrors that can be made in hypothesis testing. c. Calculating and explaining the level of significance d. Counting and explain	Criteria:understanding and accuracy in calculating and explaining: a. Hypothesis b. Mistakes that can be made in hypothesis testing. c. Level of significance (real level) d. Average hypothes is population for	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Hypothesis Testing	8%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		average hypothesispopulation for large and small samples e. Calculate and explain hypothesis tests regarding the differences between two samples. average	large and small samples e. Hypothesis test regarding the difference between two sample means. Non-test form: ● Task ● Activeness in class				
13	Able to understand, calculate and explain: Regression and correlation	Accuracy,Completeness and correctness in: a. Explainlinear relationship of more than two variables b. Explainlinear relationship of more than two variables using	Criteria:understanding and accuracy in calculating and explaining: a. linear relationship of more than two variables b. linear relationship of more than two variables using equality	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Regression and Correlation	8%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		regression equationmultiple linear. c. Calculate and explain the regression coefficient with methodsleast squares, normal equation of matrix system. d. Calculating and explaining multiple regression coefficients by calculating the standard error of multiple regression, the standard error of the multiple regression coefficient based on the formula. e. Calculate and explain forecasting with	multiple linear regression. c. regression coefficient with least squares methods, equationsnormal matrix system. d. multiple regression by calculating the standard error of multiple regression, the standard error of the multiple regression coefficient based on the formula. e. forecasting usingmultiple linear regression for know				

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		usemultiple linear regression to determine the magnitude of the influence. f. Calculating and explaining correlation using three correlation coefficients, namely the multiple determination coefficient, multiple correlation coefficient, and partial correlation coefficient.	the magnitude of influence. f. Correlation using three correlation coefficients, namely the multiple determination coefficient, multiple correlation coefficient, and partial correlation coefficient. Non-test form: ● *Case base* ● Activeness in class				
14	Able to understand, calculate and explain: Anova (Analysis of Variance)	Accuracy,Completeness and correctness in: a. Explain and count for	Criteria:understanding and accuracy in calculating and explaining:	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Anova (Analysis of Variance)	7%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
		more than two sample groups b. Explain and calculate the number of samples taken from several populations of a certain size.	a. samples taken from more than two groups b. the number of samples taken from a population of a certain size				
15	Able to understand, calculate and explain: Non-parametric statistics	Accuracy,Completeness and correctness in: c. Explainconcepts and assumptions in non-parametric statistical tests d. Calculating and explaining non-parametric statistics with various formulas	Criteria:understanding and accuracy in calculating and explaining: a. concepts and assumptions in non-parametric statistical tests b. non-parametric statistics with	Lecture Structured tasksIndependent assignment	▪ Lecture and Q&A [TM for 3x50'] ▪ Doing practice questions	Non Parametric Statistics	8%

Week 2-	Sub-CP-MK (as a final abilitywhich are expected)	Indicator	Assessment Criteria & Forms	Learning methods(Lecture / Assignment / form of learning other)	Time (Duration)	Learning materials /Study Materials [Bibliography]	Assessment Weight (%)
			various kinds of formulas Non-test form: ● Task ● Activeness in class				
16	**UAS**						

CPL PS Tourism

The learning outcomes of graduates (CPL) of the UB Tourism Study Program are as follows.
CPL2. Students are able to produce critical and innovative thinking to support business decision making in the tourism sector CPL3. Students are able to produce scientific studies to answer current issues in the tourism sector
CPL6. Students are able to implement science and technology in solving tourism problems.

TASK DESIGN

The assignments carried out in this lecture are in the form of Structured Assignments and Independent/Group Assignments.

- Structured lecture assignments are independent assignments for students in the form of homework according to the topics presented in lectures, which are done individually and can be presented/discussed in class during face-to-face meetings.
- Independent/group assignments in the form of writing individual/group papers in the form of reviews of scientific articles in international journals with a writing format adjusted to the applicable writing guidelines, and presented in class.

Percentage of Assessment

Types of Assessment	Weight
Task 1	10%
Task 2	10%
UTS	15%
UAS	15%
Case base	50%

CPL assessment and evaluation table at MK

Assignment to:	CPL	CPMK	Questions (Weight%)	Assessment Weight (test/non-test)	Weight (%)
1	2,3,6	1,2,3	Task 1		10
Midterm exam(UTS)					**15**
2	2,3,6	1,2,3	Task 2		10
Final Semester Exam (UAS)					**15**
Case base					**50**
Total weight (%)				**100**	**100**

DETERMINATION OF FINAL VALUE

Final Value Range (NA)	Letter Quality	Number Quality
> 80	A	4
75<NA ≤ 80	B+	3.5
69 <NA ≤75	B	3
60 <NA ≤ 69	C+	2.5
55 <NA ≤ 60	C	2
50 <NA ≤ 55	D+	1.5
44 <NA ≤ 50	D	1
0< NA ≤ 44	E	0

Assessment Weight Mapping - CPMK

Assessment	CPMK1	CPMK2	CPMK3
Task 1	1	0	0
Task 2	1	0	0
UTS1	0.4	0.3	0.3
UAS1	0.4	0.3	0.3
Case base	0.2	0.3	0.5