SEMESTER LEARNING PLAN

UNESA Universitas Negeri Surabaya	**SURABAYA STATE UNIVERSITY** **FACULTY OF EDUCATION** **DEPARTMENT OF EDUCATIONAL CURRICULUM AND TECHNOLOGY** **EDUCATIONAL TECHNOLOGY S1 STUDY PROGRAM**	**Document Code**

SEMESTER LEARNING PLAN						
COURSES (MK)	**CODE**	**MK family**	**WEIGHT (credits)**		**SEMESTER**	**Compilation Date**
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AUTHORIZATION	**RPS Developer**	**RMK Coordinator**	**Head of Study Program**
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Learning Outcomes (CP)	**CPL-PRODI charged to MK**	
	CPL-S 7	Able to realize the character of "Intelligent, Religious, Noble Morals, Independent, Professional and Has Excellence" in daily behavior
	CPL- P 1	Mastering concepts, structures and materials in educational technology science as a Learning Technology Developer, Education and Training Analyst, and Multimedia/Animation/Broadcast Teacher
	CPL-KK 3	Solve problems based on the case study *method* or project-based group learning *in* the field of Education technology, by prioritizing digital literacy
	CPL-KU 5	technology and local wisdom
	Course Learning Outcomes (CPMK)	
	CPMK-S 7	Students are able to realize the character of "Intelligent, Religious, Noble Morals, Independent, Professional and Has Excellence" in educational statistics learning activities
	CPMK-P 1	Students are able to master concepts, structures and statistical material in analyzing various educational problems as developers of Educational Technology
	CPMK-KK 3	Students are able to solve problems based on the case study *method* or project-based group learning *in* the field of education technology, by prioritizing digital literacy through statistical science .
	CPMK-KU 5	Students are able to use technology and information in solving problems in the field of educational technology and

		inclusive education based on digital technology and local wisdom through statistical science
	The final ability of each learning stage (Sub-CPMK)	
	Sub-CPMK1	Students are able to master the basic concepts of statistics
	Sub-CPMK2	Students are able to master the concept of population and sample
	Sub-CPMK3	Students are able to master the concept of validity and reliability of research instruments
	Sub-CPMK4	Students are able to Master the concept of Research Data
	Sub-CPMK5	Students are able to Master the concept of Data Presentation
	Sub-CPMK6	Students are able to Master the Concept of Central Tendency
	Sub-CPMK7	Students are able to master the concept of variability
	Sub-CPMK8	Students are able to master the concepts of techniques to identify the normality of data distribution
	Sub-CPMK9	Students are able to master the concept of z-score and t-score
	Sub-CPMK10	Students are able to Master the concept of Hypothesis
	Sub-CPMK11	Students are able to master the concept of Product-Moment Correlation and Spearman's Ladder.
	Sub-CPMK12	Students are able to master the concept of analysis of variance by using t test and F . test
	Sub-CPMK13	Students are able to master the concept of nonparametric data analysis
	Correlation between CPL/CPMK and Sub-CPMK	

	Sub-CPMK1	**Sub-CPMK2**	**Sub-CPMK3**	**Sub-CPMK4**	**Sub-CPMK5**	**Sub-CPMK6**	**Sub-CPMK7**	**Sub-CPMK8**	**Sub-CPMK9**	**Sub-CPMK10**	**Sub-C P MK 11**	**Sub-CPMK12**	**Sub-CPMK1 3**
CPMK-S 7													
CPMK-P 1													
CPMK-KK 3													
CPMK-KU 5													

Description Short MK	This course discusses the basic concepts of descriptive, inferential, parametric and non-parametric statistics, as well as the use of simple formulas for analyzing practical statistical problems through scientific learning. Lectures are carried out by means of blended learning. Assessment is done by way of questions and answers in writing.
Study Materials:	1. Understanding statistics

Learning Materials	2. Various statistics 3. Statistical functions in research 4. Definition of population 5. Definition of sample 6. Advantages of research using samples 7. A wide variety of sampling techniques 8. How to determine sample size 9. Validity and reliability of research instruments 10. Nominal data 11. ordinal data 12. Interval data 13. Ratio data 14. Frequency distribution table 15. histogram 16. polygon 17. Piechart 18. mean 19. mode 20. median 21. Range 22. Standard deviation 23. Variant 24. The technique of identifying the normality of the distribution of data using the Skewness 25. The technique of identifying the normality of the distribution of data using the Chi-Squared 26. Convert raw scores to Z-Score and T-Score 27. Various hypotheses 28. Hypothesis errors 29. How to test the hypothesis 30. Product-Moment Correlation and Spearman Rank 31. Analysis of variance using t test and F . test 32. Mc Nemar Test 33. Sign Test
References	**Main :**

	1. **Winarsunu, Tulus** . 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. **Hadi, S. 2007** . Education Statistics. Yogyakarta: Gajahmada University Press
	Supporters:
	1. **Riduwan.** 2014. *Introduction to Social Statistics* . Bandung: Alphabeta 2. **Rusijono, et al.** 2020. *Education Statistics Handout* . Surabaya: Education Technology FIP Unesa 3. **Sanjaya, Vienna.** 2010. *Statistical Methods* . Jakarta: Kencana 4. **Sudijono, Anas.** 2015. *Introduction to Education Statistics* . Jakarta: Rajawali Press 5. **Sudjana, Nana.** 2010. *Statistical Methods* . Bandung: Tarsito 6. **Sugiyono.** 2010 . *Statistics For Research* . Bandung: Alphabeta 7. **Sugiyono.** 2011. *Quantitative, Qualitative and R&D Research Methods* . Bandung: Alphabeta 8. **Yudiaatmaja, Fridayana.** 2013. *Regression Analysis Using SPSS Statistical Computer Application*. Jakarta: PT Gramedia Pustaka Utama
Supporting lecturer	
Subject s condition	

M g Ke-	**The final ability of each learning stage (Sub-CPMK)**	**Evaluation**		**Learning Forms, Learning Methods , Student Assignment, [Estimated time]**		**Learning materials [References]**	**Weight (%)**
		Indicator	**Criteria & Form**	**Offline Learning (*offline*)**	**Online Learning (*online*)**		
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
1.	Students are able to master the basic concepts of statistics	1. Students are able to explain the meaning of statistics 2. Students are able to explain various kinds of statistical classification 3. Students are	writing test	Lectures, Discussions, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. Hadi, S. 2007.	5 %

		able to explain statistical functions in research				Education Statistics. Yogyakarta: Gajahmada University Press	
2.	Students are able to master the concept of population and sample	1. Students are able to explain the meaning of population 2. Students are able to explain the meaning of the sample 3. Students are able to explain the advantages of research using samples 4. Students are able to explain various kinds of sampling techniques 5. Students are	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics. Yogyakarta: Gajahmada University Press	5%

		able to determine the sample size using the Krejcie Table and the Harry King Nomogram					
3.	Students are able to master the concept of validity and reliability of research instruments	1. Students are able to calculate the empirical validity of measuring instruments 2. Students are able to calculate the reliability of measuring instruments	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics. Yogyakarta: Gajahmada University Press	5%
4.	Students are able to Master the concept of Research Data	1. Students are able to mention various kinds of statistical data 2. Students are	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology.	5%

		able to classify various kinds of statistical data				Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics. Yogyakarta: Gajahmada University Press	
5.	Students are able to Master the concept of Data Presentation	1. Students can present research data in the form of a frequency distribution table 2. Students can present research data in the form of histograms 3. Students can present research data in the form of polygons 4. Students can present research data in piechart form	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics. Yogyakarta: Gajahmada University Press	5%

6.	Students are able to Master the Concept of Central Tendency	1. Students can calculate the mean 2. Students can calculate the mode 3. Students can calculate the median	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics. Yogyakarta: Gajahmada University Press	5%
7.	UTS						15%
8.	Students are able to master the concept of variability	1. Students can calculate Range 2. Students can calculate standard deviation 3. Students can calculate variance	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics.	5%

						Yogyakarta: Gajahmada University Press	
9.	Students are able to master the concepts of techniques to identify the normality of data distribution	1. Students can identify the normality of data distribution with the Skewness technique 2. Students can identify the normality of data distribution using the Chi-Squared . technique	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics. Yogyakarta: Gajahmada University Press	5%
10.	Students are able to master the concept of z-score and t-score	1. Students are able to change the Score to z-Score 2. Students are able to change the z-Score to t-Score	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. Hadi, S.	5%

						2007. Education Statistics. Yogyakarta: Gajahmada University Press	
11.	Students are able to Master the concept of Hypothesis	1. Students can formulate a null hypothesis and a working hypothesis 2. Students can identify various hypothesis errors 3. Students can find out various ways of testing hypotheses	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics. Yogyakarta: Gajahmada University Press	5%
12.	Students are able to master the concept of Product-Moment Correlation and Spearman's Ladder.	Students can calculate the Product-Moment correlation and Spearman level system	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology.	5%

						Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics. Yogyakarta: Gajahmada University Press	
13.	Students are able to master the concept of analysis of variance by using t test and F . test	Students can analyze data with variance analysis approach	writing test	Lectures, Discussions, Presentations, Questions and Answers. 1 x 50 minutes	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in Research and Psychology. Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics. Yogyakarta: Gajahmada University Press	5%
14.	Students are able to master the concept of nonparametric data analysis	Students can analyze nonparametric data with the Mc Nemar Test and Sign Test	writing test	Lectures, Discussions, Presentations, Questions and	*Asynchronic* 1 x 50 minutes	1. Winarsunu, Tulus. 2008. Statistics in	5%

		techniques.		Answers. 1 x 50 minutes		Research and Psychology. Malang: UMM Press. 2. Hadi, S. 2007. Education Statistics. Yogyakarta: Gajahmada University Press	
15.	UAS						20%

Note :

1. **Learning Outcomes of Study Program Graduates (CPL-PRODI) are** abilities possessed by every graduate of PRODI **which** are internalization of attitudes, mastery of knowledge and skills according to the level of study programs obtained through the learning process.
2. **CP L that is charged to the course** are several learning outcomes for study program graduates (CPL-PRODI) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
3. **CP Subjects (CPMK)** are abilities that are specifically described from the CPL that are charged to courses , and are specific to the study material or learning material for the course.
4. **Subject Sub-CP (Sub-CPMK)** is the ability that is specifically described from the CPMK 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** the 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 measures or benchmarks for learning achievement in assessment based on predetermined indicators. Assessment criteria are guidelines for raters so that the assessment is consistent and unbiased. Criteria can be either quantitative or qualitative.
7. **Assessment techniques:** 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 that can be presented in the form of several subjects and sub-topics.

11. **The weight of the assessment** is the percentage of assessment of each achievement of the sub-CPMK which is proportional to the level of difficulty of achieving the sub-CPMK, and the total is 100% .
12. **PB** = Learning Process, **PT** = Structured Assignments, **KM** = Independent Activities.

Student CPL Achievement Assessment & Evaluation

Mg	CPL	CPMK (CLO)	Sub-CPMK (LLO)	Indicator	Question Form - Weight(%)*)		Weight (%) Sub-CPMK	Mhs value (0-100)	=p((Mhs Grade) X (Weight%)*))	Achievement of CPL at the Constitutional Court (%)
1	CPL-P	CPMK-P	Sub-CPMK 1	1. Students are able to explain the meaning of statistics 2. Students are able to explain various kinds of statistical classification 3. Students are able to explain statistical functions in research	1) Explain the meaning of statistics! 2) Explain the various statistical classifications! 3) Explain the function of statistics in research!	5%	5%			
2	CPL-P	CPMK-P	Sub-CPMK 2	1. Students are able to explain the meaning of population 2. Students are able to explain the meaning of the sample 3. Students are able to explain the advantages of research using samples 4. Students are	1) Explain the meaning of population! 2) Explain the meaning of sample 3) Explain the advantages of research using samples! 4) Explain sampling technique 5) Determine the sample size using	5%	5%			

				able to explain various kinds of sampling techniques 5. Students are able to determine the sample size using the Krejcie Table and the Harry King Nomogram	the Harry King nomogram table					
3	CPL-P	CPMK-KK	Sub-CPMK 3	1. Students are able to calculate the empirical validity of measuring instruments 2. Students are able to calculate the reliability of measuring instruments	1) Calculate the empirical validity of the measuring instrument! 2) Calculate the reliability of the measuring instrument!	5%	5%			
4	CPL-P	CPMK-KK	Sub-CPMK 4	1. Students are able to mention various kinds of statistical data 2. Students are able to classify various kinds of	1) Mention the various statistical sata! 2) Classify statistical data according to their respective categories!	5%	5%			

				statistical data						
5	CPL-P	CPMK-KK	Sub-CPMK 5	1. Students can present research data in the form of a frequency distribution table 2. Students can present research data in the form of a histogram 3. Students can present research data in the form of polygons 4. Students can present research data in piechart form	1) Present the research data in the form of a frequency distribution table! 2) Present research data in the form of a histogram! 3) Present research data in the form of polygons 4) Present research data in piechart form	5%	5%			
6	CPL-P	CPMK-KK	Sub-CPMK 6	1. Students can calculate the mean 2. Students can calculate the mode 3. Students can calculate the median	1) Calculate the Mean of the data! 2) Calculate the median of the data! 3) Calculate the mode from the data!	5%	5%			
7	UTS					15%	15%			
8	CPL-P	CPMK-KK	Sub-CPMK 7	1. Students can	1) Calculate the range of the data!	5%	5%			

				calculate Range 2. Students can calculate standard deviation 3. Students can calculate variance	2) Calculate the standard deviation of the data! 3) Calculate the variance of the data!					
9	CPL-P	CPMK-KK	Sub-CPMK 8	1. Students can identify the normality of data distribution with the Skewness technique 2. Students can identify the normality of data distribution using the Chi-Squared . technique	1) identify the normality of the data distribution using the Skewness technique ! 2) identify the normality of the data distribution using the Chi-Squared technique !	5%	5%			
10	CPL-P	CPMK-KK	Sub-CPMK 9	1. Students are able to change the Score to z-Score 2. Students are able to change the z-Score to t-Score	1) Convert that score to a z-Score! 2) Change the z-Score to a t-Score!	5%	5%			
11	CPL-P	CPMK-KK	Sub-CPMK	1. Students can	1) Write a null hypothesis and a	5%	5%			

			10	formulate a null hypothesis and a working hypothesis 2. hypothesis errors 3. Students can find out various ways of testing hypotheses	working hypothesis! 2) Identify the various hypothesis errors! 3) Explain the various ways of hypothesis testing!					
12	CPL-P	CPMK-KK	Sub-CPMK 11	Students can calculate the Product-Moment correlation and Spearman level system	1) Calculate the product-moment correlation and the spearman ladder!	5%	5%			
13	CPL-P	CPMK-KK	Sub-CPMK 12	Students can analyze data with variance analysis approach	1) Analyze the data using the analysis of variance approach	5%	5%			
14	CPL-P	CPMK-KK	Sub-CPMK 13	Students can analyze nonparametric data with the Mc Nemar Test and Sign Test techniques.	1) Analyze the nonparametric data using the Mc Nemar Test and Sign Test techniques!	5%	5%			
15	UAS					20%	20%			
Total weight (%)						100	100			
Student's final grade (ġ(Score) X (Weight%))										

Note : CLO = Courses Learning Outcomes, LLC = Lesson Learning Outcomes