

## Universitas Negeri Surabaya Faculty of Educational Sciences Bachelor of Education Management Study Program

Document Code

## SEMESTER LEARNING PLAN

Courses			CODE				Cour	se Fa	milv			Cred	lit We	ight		SEME	STER	Cor	npilati	ion
CTATICTICS			062040242	0			Carr	ule-				T=2		5	10		2	Dat	e	- 4
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AUTHORIZAT	ION		SP Develo	per						Co	ourse	Clus	ter C	oordinator	•	Study	Progra	am Co	ordina	ator
			Windasari, Wulandari,!	S.Pd. M.Pd	, M.Pc	l dan	Dr. Ay	'n		Dr.	. Erny	/ Roe	sminir	ngsih, M.Si		Syur	nu Trih N	antoyc I.Pd.	o, S.Pd	I.,
Learning model	Project Based L	earnin	g																	
Program	PLO study pro	gram t	hat is char	ged to	o the	cour	se													
Learning Outcomes (PLO)	PLO-8	Able t soluti	to apply and ons to proble	utilize ms in	resea the fie	rch in eld of	the fi educa	eld of tion m	educa nanage	tion n	nana( t	geme	nt ind	ependently	or ir	n group	os to pr	ovide	alterna	ative
(. 20)	PLO-9	Able t	to utilize tech	nolog	y and	inforn	nation	in pro	blem	solvin	ig effo	orts a	ccordi	ng to area	of ex	pertise	Э			
	Program Objec	tives (	(PO)																	
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	PO - 2	Maste educa	er comprehen ational organi	sive a	and in s	dept	n statis	stical t	heory	and p	oracti	ce so	that y	you are abl	e to	apply i	t accor	ding to	o need	ls in
	PO - 3	Able t variou	to make the i is alternative	right c soluti	lecisio ons fro	ons ar om th	nd solv e resu	/e sta lts of	tistical analys	man is and	agem d revi	ient p ew of	roble existi	ms in educ ing data	atior	nal orga	anizatio	ons by	provid	ding
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			PO-2						/											
			PO-3		1															
			PO-4		1				/											
	PO Matrix at th	e end	of each lea	rning	stag	e (Sı	ıb-PC	)												
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			P.0		1				r			Wee	k							
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		PC	D-4								1								~	
Short Course Description	This course cont statistical problem measurements of independent sam applied to study s field of Statistics solutions. The le asynchronously.	ains de ns in th of quart pple diff simple II (Indu earning	escriptive and e field of edu tiles, percent ference test, and multiple uctive statistic method is t	l infer icatior tiles, two r correl cs) ba hroug	ential nal ma decile elated ations sed o h lect	statis nage s, sta diffei as w n ana ures	tics w ment. andarc rence vell as alysis by fac	hich c In this I devi test. c simpl of info cilitato	contair cours ation one-wa e and ormatic ors (lee	ns sta se, we and a ay & i multi on and cturer	tistica e exal avera two-w ple lir d data 's), di	al test mine ge, c vay ai near r a, and iscuss	ts and centra chi sq nova regres d prov sions	I is able to alized meas uare test, test funds. ssion. Able vide guidar and prese	forn surer one The to m ice ir entati	nulate ments ( samp use o ake str selec ons bo	proced (mean, le diffe f spps rategic rategic ting va oth syr	ural se media erence softwa decisi rious ichron	olution an, mo test, are is a ons in alterna ously	s to de), two also the tive and
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	1. Siregar, G. 2007. Data Ana	S. 2017. Metode Pene Elementary Statistics alysis. Cengage Learn	elitian Kuantitatif: Dilengka s seventh edition. Mc Graw ing Sugiono. 2017. Statisti	pi dengan Perhit v Hill Michael Loi ka untuk Peneliti	ungan Manual & SPSS. H ngnecker. 2010. An Introc an. Alfabeta: Bandung	Kencana: Jakarta luction Statistical	a Bluman Allan Methods and
	Supporters:						
	<ol> <li>Michael</li> <li>Joseph I Educatio</li> <li>Douglas Probabil</li> <li>Holmes Behavior</li> <li>Jenine K</li> <li>Nicoleta</li> <li>Sen, Ritu</li> </ol>	Longnecker. 2010. An F. Hair, William C. Blad n C. Montgomery, Eliza ty and Statistics. Wiley Finch ,Jocelyn E. Bolir ral Sciences). Chapma . Harris. 2020. Statisti Gaciu. 2021. Understa uparna & Das, Sourish	Introduction Statistical Me ck, Barry J. Babin. 2010. N beth A. Peck G. Geoffrey Y y n, Ken Kelley. 2019. Multile an and Hal cs With R: Solving Problen anding Quantitative Data ir J. 2023. Inferential Statistic	thods and Data / Multivariate Data Vining. 2021. Intr evel Modeling Us ns Using Real-W n Educational Re s. 10.1007/978-9	Analysis. Cengage Learni Analysis: A Global Persp roduction to Linear Regre sing R (Chapman & Hall/C 'orld Data. Sage Publication search. Sage Publication 981-19-2008-0_13.	ng ective Global Edi ssion Analysis (V CRC Statistics in D	ition. Pearson Viley Series in the Social and
Support lecturer	ing Windasari, S.Pd. Dr. Ayu Wulanda	, M.Pd. ri, S.Pd., M.Pd.					
Week-	Final abilities of each learning stage	Eva	aluation	He Learr Studer [Es	lp Learning, ning methods, nt Assignments, timated time]	Learning materials [ References	Assessment Weight (%)
	(Sub-PO)	Indicator	Criteria & Form	Offline( offline)	Online ( <i>online</i> )	]	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	<ol> <li>Understand the basic concepts of descriptive statistics, types of data, measurement scales and data presentation.</li> <li>Apply data presentation in the form of data tables and graphs manually and with the SPSS application</li> </ol>	<ol> <li>Able to explain the basic concepts of descriptive statistics, types of data, measurement scales and data presentation.</li> <li>Can apply data presentation in the form of data tables and graphs manually and with the SPSS application.</li> </ol>	Criteria: 1.Relevance: The opinions expressed are relevant to the learning objective (LObj) found 2.Communication: Convey opinions clearly and easily understood 3.Critical Thinking: Providing scientific and logical response knowledge 4.Attitude Ability to defend and respond to questions or objections Form of Assessment : Participatory Activities	Presentations, discussions and questions and answers 2 X 50	-	Material: Statistical concepts Reader: Michael Longnecker. 2010. An Introduction to Statistical Methods and Data Analysis. Cengage Learning	4%

2	<ol> <li>Understand the concept and calculation of averages for single and group data</li> <li>Able to calculate single and group data media</li> </ol>	<ol> <li>Able to explain centralized measurements of single and group data averages manually and SPSS</li> <li>Able to calculate single and group data average centered measurements of single and group data manually and SPSS</li> <li>Able to explain median centered measurements of single and group data manually and SPSS</li> <li>Able to calculate median centered measurements of single and group data manually and SPSS</li> <li>SPSS</li> <li>SPSS</li> <li>SPSS</li> </ol>	Criteria: 1.Background: The phenomenon and urgency of the paper being prepared 2.Theory Depth of theoretical study used 3.Discussion Depth of analysis and presentation of data using appropriate statistical tests 4.Conclusion Preparation of conclusions that are coherent with the results of the analysis 5.Relevance: The opinions expressed are relevant to the learning objective (LObj) found 6.Communication: Convey opinions clearly and easily understood 7.Critical Thinking: Providing scientific and logical response knowledge 8.Attitude: Ability to defend and respond to questions or objections 9.Preparation: Complete laptop and SPSS software for statistical tests 10.Process: Accuracy of statistical tests analysis using SPPS 11.Results :Ability to	Presentations, discussions, questions and practice analyzing 2 X 50 data	Material: Calculating the Mean, Median and Mode Reader: Sugiono. 2017. Statistics for Research. Alphabet: Bandung	6%
			10. Process: Accuracy of statistical test analysis using SPPS 11. Results : Ability to interpret statistical test results			
			Forms of Assessment : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance			

3	<ul> <li>1. Understand the concept and calculation of single and group data modes</li> <li>2. Understand the concept and calculation of single and group data quartiles</li> </ul>	<ul> <li>1. Able to calculate and interpret centralized measurements in single and group data modes</li> <li>2. Able to calculate and interpret centralized measurements of single and group data quartiles</li> </ul>	<ol> <li>Bring a laptop and have SPSS software (4)</li> <li>Very precise and efficient in using SPSS for statistical tests (4)</li> <li>Very capable of interpreting statistical test results comprehensively and in depth (4)</li> <li>Very strong in explaining the urgency and problem phenomena of the paper prepared (4)</li> <li>The theory is explained in depth and comprehensively (4)</li> <li>The theory is described in great depth and is accompanied by statistical analysis test results that are in accordance with the problem formulation. (4)</li> <li>The paper already has a conclusion but is very coherent with the content of the analysis (4)</li> <li>Form of Assessment : Assessment, Practices / Performance</li> </ol>	discussions, questions and answers and practice of 2 X 50 data analysis		Single and group data modes Reader: Michael Longnecker. 2010. An Introduction to Statistical Methods and Data Analysis. Cengage Learning	470
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4	<ol> <li>Understand the concept and perform single data decile calculations</li> <li>Understand the concept and calculate group data percentiles</li> </ol>	<ol> <li>Able to calculate and interpret single data decile measurements</li> <li>Able to calculate and interpret group data decile measurements</li> </ol>	<ul> <li>Criteria: <ol> <li>Very strong in explaining the urgency and problem phenomena of the paper prepared</li> <li>The theory is explained in depth and comprehensively</li> <li>The discussion is described in great depth and is accompanied by statistical analysis test results that are in accordance with the problem formulation.</li> <li>The paper already has a conclusion but is very coherent with the content of the analysis</li> <li>Series and the results of the analysis</li> <li>Series and efficient in using SPSS for statistical test results and in depth.</li> </ol></li></ul> Form of Assessment : Assessment of Project Results / Product Asseessment, Practices / Performance	Presentation, discussion, practice of data analysis 2 X 50	Material: Single and group data deciles Reader: Michael Longnecker. 2010. An Introduction to Statistical Methods and Data Analysis. Cengage Learning	5%
5	<ol> <li>Understand the concept and calculate the average deviation of single and group data</li> <li>Understand the concept and calculate the standard deviation of single and group data</li> </ol>	<ol> <li>Able to calculate and interpret the average deviation of single and group data</li> <li>Able to calculate and interpret the standard deviation of single and group data</li> </ol>	Criteria: 1.Background: The phenomenon and urgency of the paper being prepared 2.Theory Depth of theoretical study used 3.Discussion Depth of analysis and presentation of data using appropriate statistical tests 4.Conclusion Preparation of conclusions that are coherent with the results of the analysis 5.Preparation Complete laptop and SPSS software for statistical tests 6.Process Accuracy of statistical test analysis using SPPS 7.Results Ability to interpret statistical test results Form of Assessment : Assessment of Project Results / Product Assessment, Practices / Performance	Presentations, discussions, questions and answers, data analysis practice 2 X 50	Material: Single and group data deviations Reader: Nicoleta Gaciu. 2021. Understanding Quantitative Data in Educational Research. Sage Publications	5%

6	<ol> <li>Understand the concept and calculate the coefficient of variance</li> <li>Understand concepts and perform standard number calculations</li> </ol>	<ol> <li>Able to calculate and interpret variance coefficient measurements</li> <li>Able to calculate and interpret standard numerical measurements</li> </ol>	Criteria: 1. Relevance: The opinions expressed are relevant to the learning objective (LObj) found 2. Communication: Convey opinions clearly and easily understood 3. Critical Thinking: Providing scientific and logical response knowledge 4. Attitude Ability to defend and respond to questions or objections 5. Preparation Complete laptop and SPSS software for statistical tests 6. Process Accuracy of statistical test analysis using SPPS 7. Results Ability to interpret statistical test results 8. Background: The phenomenon and urgency of the paper being prepared 9. Theory Depth of theoretical study used 10. Discussion Depth of analysis and presentation of data using appropriate statistical tests 11. Conclusion Preparation of conclusions that are coherent with the results of the analysis	Presentations, discussions, questions and practice of 2 X 50 data analysis	Material: Standard covariance References: Joseph F. Hair, William C. Black, Barry J. Babin. 2010. Multivariate Data Analysis: A Global Perspective Global Edition. Pearson Education	6%
			Forms of Assessment : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance			

7	<ol> <li>Understand the concept and calculate the skewness of data distribution</li> <li>Understand the concept and calculate the sharpness of data distribution</li> </ol>	<ol> <li>Able to calculate and interpret the skewness of data distribution.</li> <li>Able to calculate and interpret the sharpness of data distribution</li> </ol>	Criteria: 1.Preparation Complete laptop and SPSS software for statistical tests 2.Process Accuracy of statistical test analysis using SPPS 3.Results Ability to interpret statistical test results 4.Background: The phenomenon and urgency of the paper being prepared 5.Theory Depth of theoretical study used 6.Discussion Depth of analysis and presentation of data using appropriate statistical tests 7.Conclusion Preparation of conclusions that are coherent with the results of the analysis Form of Assessment : Assessment of Project Results / Product Assessment, Practices / Performance	Presentations, discussions, questions and answers and practice of 2 X 50 data analysis		Material: Sharpness and skewness of data distribution Reference: Michael Longnecker. 2010. An Introduction to Statistical Methods and Data Analysis. Cengage Learning	5%
8	Understand meeting material 1- 7	Able to understand and carry out calculations with descriptive statistics	Criteria: 1.Preparation Complete laptop and SPSS software for statistical tests 2.Process Accuracy of statistical test analysis using SPPS 3.Results Ability to interpret statistical test results Form of Assessment : Assessment of Project Assessment, Practices / Performance	analyze material questions 1-7 2 X 50	-	Material: Statistical Material Library: Sugiono. 2017. Statistics for Research. Alphabet: Bandung	10%

9	1. Understand the concept of inferential statistics and research hypotheses	Able to explain the meaning and carry out inferential statistical tests and types of research hypotheses	Criteria: 1.Preparation Complete laptop and SPSS software for statistical tests 2.Process Accuracy of statistical test analysis using SPPS 3.Results Ability to interpret statistical test results 4.Background: The phenomenon and urgency of the paper being prepared 5.Theory Depth of theoretical study used 6.Discussion Depth of analysis and presentation of data using appropriate statistical tests 7.Conclusion Preparation of conclusions that are coherent with the results of the analysis Form of Assessment : Assessment, Practices / Performance	Presentation, discussion, questions and answers and practice of the 2 X 50 inferential test		Material: Inferential Statistics Bibliography: Jenine K. Harris. 2020. Statistics With R: Solving Problems Using Real- World Data. Sage Publication	5%
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Able to apply SPSS software to solve single sample difference test problems	Criteria: 1.Background: The phenomenon and urgency of the paper being prepared 2.Theory Depth of theoretical study used 3.Discussion Depth of analysis and presentation of data using appropriate statistical tests 4.Conclusions that are coherent with the results of the analysis 5.Assignment collection Accurate submission of assignments according to deadlines 6.Preparation Complete laptop and SPSS software for statistical tests 7.Process Accuracy of statistical test analysis using SPPS 8.Results Ability to interpret statistical test results Form of Assessment : Assessment of Project Assessment, Practices / Performance	Presentations, discussions, questions and answers and solving 2 X 50 questions	-	Material: One sample difference test References: Material: One sample difference test Reader: Nicoleta Gaciu. 2021. Understanding Quantitative Data in Educational Research. Sage Publications	8%
Understand the concept of one sample difference test and master SPSS software	Understand the concept of one sample difference test and master SPSS software	Understand the concept of one sample difference test and master SPSS software SPSS software Criteria: 1.Background: The phenomenon and urgency of the paper being prepared 2.Theory Depth of theoretical study used 3.Discussion Depth of analysis and presentation of data using appropriate statistical tests 4.Conclusion Preparation of conclusions that are coherent with the results of the analysis 5.Assignment collection Accurate submission of assignments according to deadlines 6.Preparation Complete laptop and SPSS software for statistical tests 7.Process Accuracy of statistical test 7.Process Accuracy of statistical test 7.Process Accuracy of statistical test 7.Process Accuracy of statistical test 7.Process Accuracy 7.Process Accuracy 7.Process Accuracy 7.Process Accuracy 7.Process 7.Process Accuracy 7.Process 7.Process 7.Process 7.Proces	Understand the concept of one sample difference test and master SPSS software sPSS softwareAble to apply spectrum test problemsCriteria: 1.Background: The phenomenon and urgency of the paper being prepared 2.Theory Depth of theoretical study usedPresentations, discussions, questions and answers and solving 2 X 50 questions2. Theory Depth of theoretical study used2. Theory Depth of theoretical study usedSolving 2 X 50 questions3. Discussion Depth of analysis and presentation of data using appropriate statistical tests4. Conclusion Preparation of conclusions that are coherent with the results of the analysisSolving 2 X 50 questions5. Assignment collection Accurate submission of according to deadlines6. Preparation complete laptop and SPSS software for statistical tests7. Process Accuracy of statistical tests7. Process Accuracy of statistical tests7. Process Accuracy of statistical tests8. Results Ability to interpret statistical test resultsForm of Assessment 1: Assessment of Project Results / Product Assessment, Practices / Performance	Understand the concept of one solves single solves single solves angle offference test and master       Able to apply SPSS soltware to solve angle solves angle offference test problems       Criteria:       Presentations, discussions, discussions, discussions, and answers and solving 2 x 50 questions         SPSS software       Software officience test problems       Criteria:       Presentations, discussions, discussions, and answers and solving 2 x 50 questions         Spread       2. Theory Depth of the of analysis and presentation of data using appropriate statistical tests       A. Conclusion         Preparation of conclusions that are coherent with the results of the analysis softment collection Accurate submission of analysis soft analysis software for statistical tests       5. Assignment according to dealines         6. Preparation       Complete laptop and SPSS       Software for statistical tests         7. Process Accuracy of statistical test analysis using SPPS       S. Results Ability to interpret statistical test analysis using SPPS         8. Results Ability to interpret statistical test Acseesment Practices / Performance       Form of Asseesment I: Assessment of Project Results / Product Asseessment, Practices / Performance	Understand the compared ofference test and master SPSS software       Able to tapply softwe single ofference test and master spectrum test and the master spectrum test and test spectrum test and test and test spectrum test and test an
	Able to apply SPSS software to solve single sample difference test problems	Able to apply SPSS software to sample difference test problemsCriteria: 1.Background: The phenomenon and urgency of the paper being prepared 2.Theory Depth of theoretical study used 3.Discussion Depth of analysis and presentation of data using appropriate statistical tests 4.Conclusion Preparation of conclusions that are coherent with the results of the analysis 5.Assignments according to deadlines 6.Preparation Complete laptop and SPSS software for statistical tests7.Process Accuracy of statistical test submission of assignments according to deadlines for statistical tests7.Process Accuracy of statistical test analysis using SPPS 8.Results Ability to interpret statistical test resultsForm of Assessment : Assessment of Project Results / Product Assessment, Practices / Performance	Able to apply SPSS software to solve single test problems       Criteria: 1.Background: The phenomenon and urgency of the paper being prepared       Presentations, discussions, questions and answers and solving         2.Theory Depth of theoretical study used       3.Discussion Depth of analysis and presentation of data using appropriate statistical tests       Presentations, discussions, questions and answers and solving         4.Conclusion       Preparation of conclusions that are coherent with the results of the analysis       S.Assignment collection Accurate submission of assignments according to deadlines         6.Preparation Complete laptop and SPSS software for statistical tests       Process Accuracy of statistical tests         7.Process Accuracy of statistical tests       Results Ability to interpret statistical test results         Form of Assessment : Assessment, Practices / Performance       Assessment, Practices / Performance	Able to apply SPSS software to test problems       Criteria: 1.Background: The phenomenon and urgency of the paper being prepared       Presentations, discussions, answers and solving 2 × 50 questions         2.Theory Depth of theoretical study used       3.Discussion Depth of analysis and presentation of data using appropriate statistical tests       Presentations, discussions, answers and solving 2 × 50 questions         4.Conclusion       Preparation of conclusions that are coherent with the results of the analysis       S.Assignment collection Accurate submission of assignments according to deadlines         6.Preparation Complete laptop and SPSS       S.ofware for statistical tests       T.Process Accuracy of statistical tests         7.Process Accuracy of statistical tests       Form of Assessment : Assessment of Project Results / Product Assessment, Practices / Performance	Able to apply SPSS software to sample difference test problems

	<ul> <li>1. Orderstand and carry out difference tests between two independent samples with SPSS</li> <li>2. Understand and carry out difference tests between two related samples</li> </ul>	<ul> <li>Able to apply SPSS software to solve research problems of testing the difference between two independent samples</li> <li>2.2. Able to apply SPSS software to solve the problem of testing the difference between two related samples</li> </ul>	<ol> <li>Background: The phenomenon and urgency of the paper being prepared</li> <li>Theory Depth of theoretical study used</li> <li>Discussion Depth of analysis and presentation of data using appropriate statistical tests</li> <li>Conclusion Preparation of conclusions that are coherent with the results of the analysis</li> <li>Assignment collection Accurate submission of assignments according to deadlines</li> <li>Relevance: The opinions expressed are relevant to the learning objective (LOb) found</li> <li>Communication: Convey opinions clearly and easily understood</li> <li>Critical Thinking: Providing scientific and logical response knowledge</li> <li>Attitude Ability to defend and respond to questions or objections</li> </ol>	discussion, question and answer 2 X 50		difference test between two samples <b>References:</b> Holmes Finch, Jocelyn E. Bolin, Ken Kelley. 2019. Multilevel Modeling Using R (Chapman & Hall/CRC Statistics in the Social and Behavioral Sciences). Chapman and Hal	
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13	<ol> <li>Understand and carry out one- way ANOVA tests with SPSS</li> <li>Understand and carry out two- way ANOVA tests with SPSS</li> </ol>	<ol> <li>Able to apply SPSS software to solve one-way ANOVA test research problems</li> <li>Able to apply SPSS software to solve two-way ANOVA test problems</li> </ol>	Criteria: 1.Preparation Complete laptop and SPSS software for statistical tests 2.Process Accuracy of statistical test analysis using SPPS 3.Results Ability to interpret statistical test results 4.Background: The phenomenon and urgency of the paper being prepared 5.Theory Depth of theoretical study used 6.Discussion Depth of analysis and presentation of data using appropriate statistical tests 7.Conclusions that are coherent with the results of the analysis 8.Assignment collection Accurate submission of assignments according to deadlines Form of Assessment : Assessment, Practices / Performance	Presentation, discussion, question and answer 2 X 50	Material: one- way anova test Bibliography: Holmes Finch, Jocelyn E. Bolin, Ken Kelley. 2019. Multilevel Modeling Using R (Chapman & Hall/CRC Statistics in the Social and Behavioral Sciences). Chapman and Hal	8%
	<ol> <li>Understand and perform simple linear correlation tests with SPSS</li> <li>Understand and carry out multiple linear correlation tests with SPSS</li> </ol>	<ol> <li>Able to apply SPSS software to solve simple linear correlation test research problems</li> <li>Able to apply SPSS software to solve simple linear correlation test problems</li> </ol>	Criteria: 1.Background: The phenomenon and urgency of the paper being prepared 2.Theory Depth of theoretical study 3.Discussion Depth of analysis and presentation of data using appropriate statistical tests 4.Conclusions that are coherent with the results of the analysis 5.Assignment collection Accurate submission of assignments 6.Preparation Complete laptop and SPSS software for statistical tests 7.Process Accuracy of statistical test analysis using SPPS 8.Results Ability to interpret statistical test results Form of Assessment : Assessment of Project Results / Product Assessment, Practices / Performance	Presentation, discussion, question and answer 2 X 50	Material: simple linear correlation test Reader: Michael Longnecker. 2010. An Introduction to Statistical Methods and Data Analysis. Cengage Learning	6%

15	1.Understand and perform simple linear regression tests with SPSS 2.Understand and carry out multiple linear regression tests with SPSS	<ol> <li>Able to apply SPSS software to solve simple linear regression test research problems</li> <li>Able to apply SPSS software to solve multiple linear regression test problems</li> </ol>	Criteria: 1.Preparation Complete laptop and SPSS software for statistical tests 2.Process Accuracy of statistical test analysis using SPPS 3.Results Ability to interpret statistical test results 4.Relevance: The opinions expressed are relevant to the learning objective (LObj) found 5.Communication: Convey opinions clearly and easily understood 6.Critical Thinking: Providing scientific and logical response knowledge 7.Attitude Ability to defend and respont to questions or objections 8.Background: The phenomenon and urgency of the paper being 9.Theory Depth of theoretical study 10.Discussion Depth of analysis and presentation of data using appropriate statistical tests 11.Conclusion Preparation of conclusions that are coherent with the results of the analysis 12.Assignment collection Accurate submission of assignments Forms of Assessment	Presentations, discussions, questions and answers and practice of 2 X 50 data analysis	Material: simple linear regression test Reference: Jenine K. Harris. 2020. Statistics With R: Solving Problems Using Real- World Data. Sage Publication	4%
			Forms of Assessment : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance			

16	Able to carry out analysis and testing of inferential statistical data	Manu carried out inferential statistical analysis and tests	Criteria: 1. Preparation Complete laptop and SPSS software for statistical tests 2. Process Accuracy of statistical test analysis using SPPS 3. Results Ability to interpret statistical test results Form of Assessment : Practice / Performance	Practice 2 X 50 inferential test analysis		Material: Inferential Inferential Statistical tests References: Siregar, S. 2017. Quantitative Research Methods: Equipped with Manual Calculations & SPSS. Kencana: Jakarta Bluman Allan G. 2007. Elementary Statistics seventh edition. McGraw Hill Michael Longnecker. 2010. An Introduction to Statistical Methods and Data Analysis. Cengage Learning Sugiono. 2017. Statistics for Research. Alphabet: Bandung	14%
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## Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	13.5%
2.	Project Results Assessment / Product Assessment	37.5%
3.	Practice / Performance	49%
		100%

Notes

- 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.
- 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.