
 Universitas Airlangga	SEMESTER LEARNING PLAN		Prepared by	Examined by	Approved by	Document Registration Number
	SLP		(Person in Charge)	(Head of Bachelor Program / Head of Department)	Vice Dean I	01/S1Kesmas/RPS/2019
			Revision - Date	January 1 st , 2019	Dr. Diah Indriani, S.Si., M.Si	
Faculty of Public Health	Valid on Semester (odd/even) / Academic Year	Even Semester	(sign)	(sign)	(sign)	

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A. DETAILS OF COURSE


1. Course Name	Parametrics Biostatistics
2. Course Code	MAS208
3. Credits (SKS)	2 (two) SKS
4. Semester / Term	VI (sixth)
5. Study Program	Bachelor of Public Health
6. Student Learning Achievement	At the end of the course, students will be able analyze data related to public health problem.
7. Course Learning Achievement	<ol style="list-style-type: none"> 1. Students will be able to define the scope of parametric biostatistics 2. Conclude the results of the two-way Anova test calculation 3. Conclude the results of the linear correlation calculation 4. Conclude up the results of simple linear regression calculations 5. Conclude the results of the calculation of multiple linear regression 6. Conclude the results of calculations of time series analysis and trends
8. Course Description	This material discusses the concept of parametric biostatistics test, the principle and application of 2-way Anova, the concept and application of simple and multiple linear correlation and regression, the principles and application of time series and trends
9. Course Prerequisites (if any)	Basic Biostatistics
10. Instructor	Dr. Diah Indriani, S.Si., M.Si
11. Teaching Assistants	Dr Hari Basuki N., dr., M.Kes Mahmudah, Ir., M.Kes

B. TEACHING PROGRAM

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Week	Skills expected at the end of each learning phase (Sub-Course Achievement) (C, A, P)	Study Materials	Teaching Methods	Additional Materials for Learning	Meeting Time	Course Objectives	Criteria and Indicator of Evaluation / Measurable Learning Outcome (hard and soft skills)	Mark / Grade / Percentage (%)	Reference Number Ref. (number)
1	2	3	4	5	6	7	8	9	10
1	Students will be able to define the scope of parametric biostatistics	College contracts and Definition of parametric biostatistics: a. College contract b. The concept of parametric biostatistics test c. A variety of parametric biostatistical tests d. Terms of use of parametric biostatistical tests	Lecture, discussion, question and answer	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students - Critical thinking skills		1 – 4 7 – 10
2	Summed up the results of the two-way Anova test calculation	- Two-way Anova test principle - Anova test principle and application of	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective		1 – 5 8 – 11

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1	2	3	4	5	6	7	8	9	10
		two-way randomize block design - The principle and application of the two-way factorial ANOVA test and the principle of interaction The principle and application of two-way Anova same subject					communication in students - Critical thinking skills		
3	Conclude the results of the two-way Anova test calculation	- Two-way Anova test principle - Anova test principle and application of two-	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students		1 – 5 8 – 11

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		way randomize block design - The principle and application of the two-way factorial ANOVA test and the principle of interaction The principle and application of two-way Anova same subject					- Critical thinking skills		
4	Conclude the results of the two-way Anova test calculation	- Two-way Anova test principle - Anova test principle and application of two-way randomize block design	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students		1 – 5 8 – 11

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1	2	3	4	5	6	7	8	9	10
		- The principle and application of the two-way factorial ANOVA test and the principle of interaction The principle and application of two-way Anova same subject					- Critical thinking skills		
5	Conclude the results of the two-way Anova test calculation	- Two-way Anova test principle - Anova test principle and application of two-way randomize block design	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students - Critical thinking skills		1 – 5 8 – 11

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1	2	3	4	5	6	7	8	9	10
		- The principle and application of the two-way factorial ANOVA test and the principle of interaction The principle and application of two-way Anova same subject							
6	Students are able to do exercises related to the material that has been given	Anova two-way exercises	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students - Critical thinking skills		1 – 5 8 – 11

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1	2	3	4	5	6	7	8	9	10
7	Conclude the results of the linear correlation calculation	Pearson moment product correlations: a. Concept of relationship b. The principle and application of Pearson correlation c. The principle and application of Pearson correlation belief intervals	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students - Critical thinking skills		1 – 5 8 – 11
MID TERM EXAMINATION									
8	Conclude the results of simple linear regression calculations	Simple linear regression: a. Concept of influence	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out,	2x50 minutes		- Listening skill - Develop collaboration and effective		6 – 12

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1	2	3	4	5	6	7	8	9	10
		b. The concept of assumptions in linear regression c. The principle and application of simple linear regression d. The concept of forecasting is in a simple linear regression model		LCD, and whiteboard			communication in students - Critical thinking skills - Social skills in the discussion process		
9	Conclude the results of simple linear regression calculations	Simple linear regression: a. Concept of influence b. The concept of assumptions in linear regression	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students - Critical thinking skills		6 – 12

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1	2	3	4	5	6	7	8	9	10
		c. The principle and application of simple linear regression d. The concept of forecasting is in a simple linear regression model					- Social skills in the discussion process		
10	Conclude the results of the calculation of multiple linear regression	a. The concept of multiple linear regression b. The principle and application of multiple linear regression c. The concept of forecasting in the multiple linear regression model	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students - Critical thinking skills - Social skills in the discussion process		6 – 12

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1	2	3	4	5	6	7	8	9	10
		d. Selection of the best model							
11	Conclude the results of the calculation of multiple linear regression	a. The concept of multiple linear regression b. The principle and application of multiple linear regression c. The concept of forecasting in the multiple linear regression model d. Selection of the best model	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students - Critical thinking skills - Social skills in the discussion process		6 – 12

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1	2	3	4	5	6	7	8	9	10
12	Conclude the results of time series and trend analysis calculations	Time series and trend analysis: a. The concept of time series analysis and trends b. Principles and application of time series and trends c. The concept of forecasting in the time series model	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students - Critical thinking skills - Social skills in the discussion process		6 – 12
13.	Conclude the results of time series and trend analysis calculations	Time series and trend analysis: a. The concept of time series analysis and trends	Lectures, discussions, questions and answers, exercises, assignments	Teaching materials, Hand out, LCD, and whiteboard	2x50 minutes		- Listening skill - Develop collaboration and effective communication in students		6 – 12


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1	2	3	4	5	6	7	8	9	10
		b. Principles and application of time series and trends c. The concept of forecasting in the time series model					- Critical thinking skills - Social skills in the discussion process		
FINAL TERM EXAMINATION									

C. REQUIRED TEXTS / REFERENCES / ESSENTIAL READINGS

1. Rosner B. 1990. Fundamental of Biostatistics 3 rd. Ed PWS KENT Publishing company, Boston.
2. Dixon WJ dan Massey FJ. 1991. Pengantar Analisis Statistik. Gadjah Mada University Press. Yogyakarta.
3. Stell RGD dan Torrie JH. 1989. Prinsip dan Prosedur Statistika Suatu Pendekatan Biometrik. PT Gramedia, Jakarta.
4. Pagano, Marcello and Gaufreau K. 1992. Principle of Biostatistics. Publishing company, Duxbury press, California.

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5. Kleimbaum DG., Kupper, Laurence L., Muller, Keith E. 1992. Applied Regression Analysis and Other Multivariate Methods. PWS KENT Publishing company, Boston.
 6. Hadi, Sutrisno. 2000. Analisis Regresi. Yogyakarta. ANDI.
 7. Khazanie, Ramakant. 1990. Elementary Statistics in a Word of Applications Third Edition. Scott, Foresman and Company.
 8. Kuzma, Jan W. 1984. Basic Statistics for The Health Sciences.. Mayfied Publishing Company.
 9. Larson, Rom., and Farber, Betsy. 2010. Elementary Statistics Picturing The World. Prentice Hall Inc.
 10. Saunders, Beth Dawson dan Trapp, Robert G. 1994. Basic & Clinical Biostatistics Second Edition. Appleton & Lange.
 11. Sokal, Robert R., 1992. Pengantar Biostatistika edisi kedua. Yogyakarta Gadjah Mada University Press.
 12. Sudjana. 2002. Teknik Analisis Regresi dan Korelasi bagi Para Peneliti. Bandung. Tarsito.