SEMESTER LESSON PLAN (RPS)

STATISTICS

Lecturer:
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CULINARY EDUCATION STUDY PROGRAM
DEPARTMENT OF FAMILY WELFARE EDUCATION
FACULTY OF TECHNOLOGY AND VOCATIONAL EDUCATION
UNIVERSITAS PENDIDIKAN INDONESIA
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	SEMESTER LESSON PLAN (RPS)	Doc. No : FPTK-UPI-SIL-E0751.33
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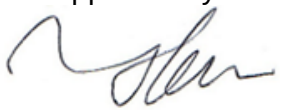
Prepared by:  Drs. Karpin, M.Pd NIP. 19660710 199303 1 001	Verified by:  Dr. Ai Mahmudatussa'adah., M.Si NIP. 19780716 200604 2 004	Approved by:  Dr. Yulia Rahmawati, M.Si. NIP. 19670720 199303 2 009
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SEMESTER LEARNING PLAN

1. Course Identity

Study Program Name	:	Culinary Education Study Program
Name of Course :	:	Statistics
Code of Course:	:	BG300
Group of Course*)	:	Study Program Core Expertise Courses (MKKIPS)
SKS weight	:	2 (two) SKS
Level	:	S1
Semester	:	Even
Prerequisite	:	Basic Mathematics
Status (Mandatory/Optional) *)	:	**Mandatory**
Lecturer Name and Code	:	Drs. Karpin, M.Pd./ 1779

2. Course Description

The Statistics course is a group of Study Program Core Expertise Courses (MKKIPS) to be taken by all students in the S-1 Culinary Education program. After completing this course, students can understand the basic knowledge of statistics; perform data collection and presentation; count statistics and parameters from a data set; determine the shape of the data distribution in terms of the slope and kurtosis of the data distribution curve; reading and using distribution tables; perform correlation analysis and simple linear regression; formulate hypotheses and perform hypothesis testing, as well as draw conclusions from the results of hypothesis testing. This course discusses the definition of statistics and statistics; types of data; data collection technique; presentation of data in the form of tables and diagrams; size of concentration, location and dispersion; the size of the slope and kurtosis; normal distribution table, student, chi-square, and F; simple linear regression and correlation; hypothesis and hypothesis testing. Learning approaches and strategies follow general pedagogical rules, namely learning starts from the concrete to the abstract, from simple to complex, and from easy to difficult, using various learning resources. In particular, the problem-solving approach is the focus of learning. The evaluation phase of student competency mastery is carried out through the Mid-Semester Exam and the Final Semester Exam as well as evaluation of the completion of assignments.

3. Program Learning Outcomes (PLO)

S : Demonstrate scientific, educative, and religious attitudes and behaviors contributing to improving the quality of life in society, nation, and state, based on academic norms and ethics
P4 : Proficient in theoretical concept research method of Culinary Education
KU : Can apply logical, critical, systematic, and innovative thinking in the context of science and technology development or implementation that pays attention to and applies humanities values corresponding their area of expertise.
KK5 : Can conduct quantitative and qualitative research in the area of Culinary Education

4. Course Learning Outcomes (CLO)

CLO1 **:** Can explain data collection techniques to obtain objective data and avoid data bias.
CLO2 **:** Can present data in various forms according to the purpose and interpret the data presented.
CLO3 **:** Can process statistical data and interpret the results systematically and independently with a responsible attitude.
CLO4 **:** Can formulate and test hypotheses on parametric data processing and interpret the test results systematically and independently with a responsible attitude.

5. Description of Learning Plan

Meeting	Sub-CLO and Course Learning Outcome Indicators	Study Modules	Learning Format	Time	Assignment and Evaluation	References
1	Sub-CLO: Understand basic concepts in statistics Indicators: a. Explain the definition of statistical and statistics. b. Explain the definition of data and the types of data c. Distinguish population and sample d. Explain the definition of variables and their types e. Differentiate between sampling and census techniques f. Describe the scope of descriptive and inferential statistics.	Basic understanding in statistics a. Statistical, and statistics b. data and data types c. population and sample, d. variables and their types, e. sampling and census techniques f. descriptive and inferential statistics	Online Lectures	2 x 50’	Structured assignments: basics of statistics	References (a), (b), and (b.)
2	Sub-CLO: Proficient in data presentation techniques. Indicators: a. present data in tabular form. b. present data in the form of diagrams.	Data presentation techniques: a. Table, b. diagram, c. frequency distribution table, d. Histogram, e. frequency polygon, f. ogive	Online Lectures	2 x 50’	Structured Assignments: Data presentation techniques	References (a), (b), and (b.)

	c. Present data in the form of a frequency distribution table d. present data in the form of a histogram e. present data in the form of frequency polygons f. Present data in ogive form					
3	Sub-CLO: Count center size and position size and interpret them Indicators: a. count the average of data groups b. count data group mode c. count the median of data groups d. count the quartile of the data group e. count the deciles of the data group f. count the percentile of the data group g. interpret centering measure value h. interpret location size values	Centering size and layout size: a. definition of centering size and location size. b. Average, c. Mode, d. Median, e. Quartile, f. decile and g. Percentile	Online Lectures	2 x 50’	Structured assignments: center size and layout size	References (a), (b), and (b.)
4	Sub-CLO:	Size deviation:	Online Lectures	2 x 50’	Structured assignments:	References (a), (b), and (b.)

	Count the size of the deviation and interpret it. Indicators: a. explain the definition of deviation size b. count range c. count the inter-quartile range d. count the semi-quartile range e. count standard deviation f. count variance g. interpret deviation measure value	a. definition of deviation size b. range c. inter-quartile range d. semi-quartile range e. standard deviation f. variance			deviation measure	
5	Sub-CLO: Analyze the slope and sharpness of the distribution curve of the data group Indicators: a. Count the slope coefficient of the distribution curve of the data group b. Count the curvature (kurtosis) of the distribution curve of the data group c. Interpret the value of the slope coefficient and the steepness of the data distribution curve	Data group distribution curve model: a. the slope coefficient of the distribution curve of the data group b. the sharpness (kurtosis) of the distribution curve of the data group c. interpretation of the slope coefficient value and the steepness of the	Online Lectures	2 x 50’	Structured Assignments: The slope of the data distribution curve and kurtosis	References (a) and (b)

		data distribution curve				
6	Sub-CLO: use the normal distribution table and student distribution table at a certain level of significance and degrees of freedom Indicators: a. define the normal distribution density function b. count the z score c. determine the probability value in the normal distribution table d. interpret the students distribution density function e. determine the probability value in the student distribution table.	Distribution curve: a. Normal distribution density function b. Z score transformation c. Normal distribution table d. Students distribution density function e. Degree of significance and degrees of freedom f. Student distribution table	Online Lectures	2 x 50’	Structured assignments: normal distribution and student distribution	References (a) and (b)
7	Sub-CLO: Use the Chi-Square distribution table and the F . distribution table Indicators: a. determine the probability value in the Chi-Square distribution table	Distribution Curve: a. Chi-Square distribution table b. F distribution table c. Degree of significance and degrees of freedom	Online Lectures	2 x 50’	Structured assignments: chi-square distribution and F distribution	References (a) and (b)

	b. determine the probability value in the F . distribution table c. Count probability by means of interpolation	d. Interpolation				
8	**Mid-Term Exam**			2 x 50’		
9	Sub-CLO: Formulate and test hypotheses. Indicators: a. Explain the definition of hypothesis b. Formulate a definite hypothesis c. Formulate the hypothesis uncertainly d. Test the hypothesis in a one-sided way e. Test the hypothesis in a two-sided way	Hypothesis and hypothesis testing: a. Understand the hypothesis b. Hypothesis formulation c. Hypothesis testing	Online Lectures	2 x 50’	Structured assignment: hypothesis formulation	References (a), (b), and (c)
10	Sub-CLO: Test the normality of the data distribution and the homogeneity of variance Indicators: a. test the normality of the data distribution with Chi-Square.	Test for normality of data distribution and homogeneity of variance.	Online Lectures	2 x 50’	Structured assignment: normality and homogeneity test	References (a) and (b)

	b. Test the homogeneity of variance					
11	Sub-CLO: Perform correlation analysis Indicators: a. Explain the definition of correlation b. Formulate hypotheses in correlation analysis. c. count correlation coefficient	Correlation analysis: a. Definition of correlation b. Correlation coefficient c. Significance of correlation coefficient	Online Lectures	2 x 50’	Structured assignment: correlation analysis	References (a), (b), and (c)
12	Advanced Correlation Analysis d. Setting the level of significance e. Define table statistics f. Calculate count statistics g. Define the area of acceptance and rejection of the null hypothesis h. Draw conclusions from the results of hypothesis testing	Advanced	Online Lectures	2 x 50’	Structured assignment: correlation analysis	References (a), (b), and (c)
13	Sub-CLO: Perform regression analysis Indicators: a. Explain the definition of regression	Regression Analysis a. Definition of regression analysis b. Regression equation	Online Lectures	2 x 50’	Structured assignments: regression analysis	References (a), (b), and (c)

	b. Determine the regression equation	c. Independent test between variables d. Regression fit test				
14	Advanced Regression Analysis c. Test the independence between variables d. Test regression fit	Advanced	Online Lectures	2 x 50’	Structured assignments: regression analysis	References (a), (b), and (c)
15	Lecture Review	All course materials	Online Lectures	2 x 50’	Formative Test	References (a), (b), and (c)
16	Semester Final Exam			2 x 50’		

6. References

a. Roxy Peck etc (2011) Introduction to Statisctic and Data Analysis. Boston: Cengage Learning
b. Solimun et al (2019) Multivariate Statistical Method Generalized Structured Component Analysis (GSCA) Structural Equation Modeling (SEM). Malang, Indnesia: UB Press
c. Sugiyono. (2015). Research Method of Education. Alfabeta: Bandung.