	Universitas Negeri Surabaya Faculty of Sports and Health Sciences Bachelor of Sports Science Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Statistics	8920102169		T=3	P=0	ECTS=4.77	3	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
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Learning model	**Case Studies**
Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**
	Program Objectives (PO)
	PLO-PO Matrix

	P.O

PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Short Course Description	This course is designed to examine various statistical concepts applied in the field of sports science. In this course, descriptive statistics, analytical prerequisite tests, parametric statistical tests and non-parametric statistical tests will be discussed.
References	**Main :**

1. Gudono. 2012. Analisis Data Multivariat Edisi Kedua. Yogyakarta: BPFE
2. Maksum, A. 2018. Statistik dalam Olahraga . Surabaya: Unesa Press
3. Rosner, B. 2015. Fundamental of Biostatistic, 8th Edition. Boston: Cengage Learning Inc
4. Sugiono. 2010. Statistik untuk Penelitian. Jakarta: Alfabeta
5. Wahana Komputer. 2012. Solusi Prakatis dan Mudah Menguasai SPSS 20 untuk Pengolahan Data. Yogyakarta: Andi Offset
6. Weiss, N. A. 2017 Elementary Statistic 10th Edition. Boston: Pearson

Supporters:	
Supporting lecturer	Dr. Or. Purbodjati, M.S. Dr. Achmad Widodo, M.Kes. Nanda Rimawati, S.K.M., M.K.M. Yetty Septiani Mustar, S.KM., M.P.H. Anindya Mar'atus Sholikhah, S.KM., M.Kes.

Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline (*offline*)	Online (*online*)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Able to describe objects, symptoms and events in everyday life statistically	1. Distinguish the concepts of statistics and statistics correctly 2. Understand the concepts of population and sample and terms in descriptive statistics	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Face-to-face meetings / virtual conferences, discussions, independent study (assignment to read material) 2 X 50			0%
2	Able to describe objects, symptoms and events in everyday life statistically	1. Understand the concepts of population and sample 2. Understand the concept of variables 3. Understand and distinguish types of data scales appropriately	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Videos, quizzes, reading assignments, and independent study 2 X 50			0%

3	Able to calculate the size of centralization and size of data spread	1. Calculate central tendency (mean, mode, median, quartiles), standard deviation and variance correctly 2. Create a frequency distribution table 3. Presenting data into various graphs/diagrams correctly	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Face-to-face meetings / virtual conferences, lectures, discussions, 2 X 50 group assignments			0%
4	Able to calculate the size of centralization and size of data spread	1. Calculate central tendency (mean, mode, median, quartiles), standard deviation and variance correctly 2. Create a frequency distribution table 3. Presenting data into various graphs/diagrams correctly	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Structured group assignments and independent study 2 X 50			0%

5	Able to test the prerequisites for parametric statistical test analysis and able to interpret the results	1. Understand the concept and purpose of normality testing 2. Perform normality tests and interpret the results correctly	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Face-to-face meetings / virtual conferences, discussions, structured assignments, independent study 2 X 50			0%
6	Able to test the prerequisites for parametric statistical test analysis and be able to interpret them	1. Understand the concept and purpose of homogeneity testing 2. Perform homogeneity tests and interpret the results correctly	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Structured group assignments, quizzes and independent study 2 X 50			0%

7	Able to test the prerequisites for parametric statistical test analysis and be able to interpret them	1. Understand the concept and purpose of data linearity testing 2. Perform linearity tests and interpret the results correctly	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Face-to-face meetings / virtual conferences, presentations, and independent study 2 X 50			0%
8	MIDTERM EXAM			Presentation of group assignments 2 X 50			0%
9	Carrying out parametric statistical tests to analyze data and interpret it	1. Understand the concepts and objectives of parametric statistics 2. Distinguish between types of parametric statistical tests and be able to choose the right test 3. Understand and analyze differences between two groups using paired t-test and independent t-test 4. Understand and analyze differences > 2 groups using ANOVA one way 5. Understand and analyze the relationship between two variables using the Pearson's product moment correlation test 6. Carry out prediction tests using regression analysis 7. Able to interpret the results of parametric test analysis	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Face-to-face meetings / virtual conferences, lectures, discussions, quizzes, (indicators 1 and 2) and independent study 2 X 50			0%

10	Carrying out parametric statistical tests to analyze data and interpret it	1. Understand the concepts and objectives of parametric statistics 2. Distinguish between types of parametric statistical tests and be able to choose the right test 3. Understand and analyze differences between two groups using paired t-test and independent t-test 4. Understand and analyze differences > 2 groups using ANOVA one way 5. Understand and analyze the relationship between two variables using the Pearson's product moment correlation test 6. Carry out prediction tests using regression analysis 7. Able to interpret the results of parametric test analysis	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Video tutorials for indicators 3 and 7, reading assignments, and independent study 2 X 50			0%
11	Carrying out parametric statistical tests to analyze data and interpret it	1. Understand the concepts and objectives of parametric statistics 2. Distinguish between types of parametric statistical tests and be able to choose the right test 3. Understand and analyze differences between two groups using paired t-test and independent t-test 4. Understand and analyze differences > 2 groups using ANOVA one way 5. Understand and analyze the relationship between two variables using the Pearson's product moment correlation test 6. Carry out prediction tests using regression analysis 7. Able to interpret the results of parametric test analysis	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Face-to-face meetings / virtual conferences, lectures, discussions (indicators 4 and 7), and independent study 2 X 50			0%

12	Carrying out parametric statistical tests to analyze data and interpret it	1. Understand the concepts and objectives of parametric statistics 2. Distinguish between types of parametric statistical tests and be able to choose the right test 3. Understand and analyze differences between two groups using paired t-test and independent t-test 4. Understand and analyze differences > 2 groups using ANOVA one way 5. Understand and analyze the relationship between two variables using the Pearson's product moment correlation test 6. Carry out prediction tests using regression analysis 7. Able to interpret the results of parametric test analysis	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Structured group assignments (indicators 5 and 7) and independent study 2 X 50			0%
13	Carrying out parametric statistical tests to analyze data and interpret it	1. Understand the concepts and objectives of parametric statistics 2. Distinguish between types of parametric statistical tests and be able to choose the right test 3. Understand and analyze differences between two groups using paired t-test and independent t-test 4. Understand and analyze differences > 2 groups using ANOVA one way 5. Understand and analyze the relationship between two variables using the Pearson's product moment correlation test 6. Carry out prediction tests using regression analysis 7. Able to interpret the results of parametric test analysis	**Criteria:** 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Face-to-face meetings / virtual conferences, lectures, discussions, assignments to read material (indicators 6 and 7) and independent study 2 X 50			0%

14	Carrying out non-parametric statistical tests to analyze data that does not meet the prerequisites for parametric tests and their interpretation	1.Understand the concepts and objectives of non-parametric statistics 2.Analyzing differences for dependent and non-dependent samples that are not normally distributed 3.Analyze the relationship/correlation between two variables that are not normally distributed 4.Interpret analysis results appropriately	**Criteria:** 1.The assessment is carried out on the following aspects: 2.Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Indicator 1 tutorial videos, quizzes, structured assignments, and 2 X 50 independent learning			0%
15	Carrying out non-parametric statistical tests to analyze data that does not meet the prerequisites for parametric tests and their interpretation	1.Understand the concepts and objectives of non-parametric statistics 2.Analyzing differences for dependent and non-dependent samples that are not normally distributed 3.Analyze the relationship/correlation between two variables that are not normally distributed 4.Interpret analysis results appropriately	**Criteria:** 1.The assessment is carried out on the following aspects: 2.Participation during lectures is carried out through observation and is given weight. Subumative test (UTS) is carried out once with indicators 1-7 through a written test and given weight. UAS grades are carried out in writing with indicators 9-15 given a weight. The final NA is [(participation value x 2) (UTS value x 2) (assignment value x 3) (UAS value x 3)] divided by 10	Face-to-face meetings / virtual conferences, lectures, discussions, assignments to read material (indicators 2-4) and independent study 2 X 50			0%
16							0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

Notes

1. **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.
2. **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** 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 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.