| | | | | | | | **Document Code** |
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**Universitas Negeri Surabaya**
**Faculty of Sports and Health Sciences,**
**Bachelor of Physical Education, Health & Recreation Study Program**

# SEMESTER LEARNING PLAN

| Courses | CODE | Course Family | Credit Weight | | | SEMESTER | Compilation Date |
|---|---|---|---|---|---|---|---|
| **Statistics** | 8520103182 | Compulsory Study Program Subjects | **T=3** | **P=0** | **ECTS=4.77** | 6 | April 29, 2023 |

| AUTHORIZATION | SP Developer | Course Cluster Coordinator | Study Program Coordinator |
|---|---|---|---|
| | Dr. Nur Ahmad Arief, M.Pd. | Prof. Ali Maksum, M.Si | Dr. Mochamad Ridwan, S.Pd., M.Pd. |

| Learning model | Case Studies |
|---|---|

| Program Learning Outcomes (PLO) | **PLO study program that is charged to the course** |
|---|---|
| | **Program Objectives (PO)** |
| | **PO - 1** — This course discusses theoretical understanding and mastery as well as the application of various statistical tests, both descriptive and inferential statistics, to process research data and draw conclusions from the interpretation results which can be applied to complete a thesis. |
| | **PLO-PO Matrix** |

| P.O |
|---|
| PO-1 |

**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 |
| PO-1 | | | | | | | | | | | | | | | | |

| Short Course Description | This course discusses theoretical understanding and mastery as well as the application of various statistical tests, both descriptive and inferential statistics, to process research data and draw conclusions from the interpretation results which can be applied to complete a thesis. |
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| References | **Main :** |
|---|---|

1. Maksum,Ali, 2007, Buku Ajar Statistik dalamOlahraga, Jurusan Pendidikan Olahraga-Unesa, Surabaya
2. Sabri, Luknis. dan Hastowo, Sutanto Priyo. , 2006, Statistik Kesehatan, Jakarta, Raja Grafindo Press
3. Hastowo, Sutanto Priyo, 2006, Managemen dan Analisis Data, FakultasKesehatan Masyarakat-UI, Depok
4. Boslaugh, Sarah and Watter,Paul Andrew, 2008. Statistics in aNutshell : A Desktop Quick Reference, Sebastopol Canada, O 19Reilly
5. Field, Andy, 2009. DiscoveringStatistic Using SPSS, London. SAGE Publication.
6. Mann,Prem S. , 2010. Introductory Statistics7th , Hoboken-USA. John Wiley & Sons, Inc.

**Supporters:**

1. Hendikawati, P. (2012). Pengembangan Buku Ajar Statistika Berbasis Spss. 8(2), 163–174.
2. Musdansi, D. P., & Nazli, R. (2012). Pengembangan Buku Ajar Statistika Berbasis Spss Sebagai Self Education Mahasiswa. 8(2), 147–158.
3. Taqwa, M., & Taufik, A. (2019). Pengembangan Buku Ajar Statistika Dengan Software R Untuk Meningkatkan Motivasi Belajar Dan Pemahaman. Histogram: Jurnal Pendidikan Matematika, 3(2), 122. Https://Doi.Org/10.31100/Histogram.V3i2.449

| Supporting lecturer | Prof. Dr. Ali Maksum, S.Pd., M.Si.<br>Dr. Nur Ahmad Arief, S.Pd., M.Pd.<br>Kolektus Oky Ristanto, S.Pd., M.Pd. |
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| 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 explain the meaning of functions, types and basics of statistical analysis | - Explain the meaning of functions and types of statistics - Explain the basics of statistical analysis (Data, - Variables, Hypothesis, Population, Sample and measurement scale) | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Tests | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** Understanding the function, types and basics of statistical analysis. **Reference:** *Maksum, Ali, 2007, Textbook of Statistics in Sports, Department of Sports Education, Unesa, Surabaya* | 9% |
| 2 | Skilled in creating and calculating Frequency Distributions and Measurement Norms on statistical data | Able to create and calculate Frequency Distributions and Measurement Norms on statistical data | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done **Form of Assessment** : Participatory Activities | Lectures, assignments, group discussions, class discussions 3 x 50 | | **Material:** Creating and calculating Frequency Distributions and Measurement Norms on statistical data **Reference:** *Maksum, Ali, 2007, Textbook of Statistics in Sports, Department of Sports Education-Unesa, Surabaya* | 5% |
| 3 | Skilled in creating and calculating Central Tendency and Variability in statistical data | Able to create and calculate Central Tendency and Variability in statistical data | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done **Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** Central Tendency and Variability in statistical data **Reference:** *Maksum, Ali, 2007, Textbook of Statistics in Sports, Department of Sports Education-Unesa, Surabaya* | 5% |
| 4 | Skilled in processing and interpreting descriptive tests and data requirements using SPSS | Able to process and interpret descriptive tests and data requirements including normality, homogeneity and linearity using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done **Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** processing and interpreting descriptive tests and data requirements using SPSS **Library:** *Sabri, Luknis. and Hastowo, Sutanto Priyo. , 2006, Health Statistics, Jakarta, Raja Grafindo Press* | 5% |

| 5 | Skilled in processing and interpreting Paired Sample T-Test using SPSS | Able to process and interpret Paired Sample T-Test using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done<br><br>**Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** processing and interpreting Paired Sample T-Test using spss<br>**Reference:** *Maksum, Ali, 2007, Textbook of Statistics in Sports, Department of Sports Education-Unesa, Surabaya* | 5% |
| 6 | Skilled in processing and interpreting Independent Samples using SPSS | Able to process and interpret Independent Sample T-Test using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done<br><br>**Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** processing and interpreting Independent Samples using SPSS<br>**Reference:** *Maksum, Ali, 2007, Textbook of Statistics in Sports, Department of Sports Education-Unesa, Surabaya* | 5% |
| 7 | Skilled in creating and calculating Anova tests using SPSS | Able to create and calculate Anova Test using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done<br><br>**Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** create and calculate Anova Test using SPSS<br>**Library:** *Maksum, Ali, 2007, Textbook of Statistics in Sports, Department of Sports Education-Unesa, Surabaya* | 5% |
| 8 | UTS | able to understand meeting material 1-7 | **Criteria:** You get a score of 100 if you get all the questions right<br><br>**Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance | UTS 2 X 50 | | **Material:** UTS<br>**Library:** *Maksum, Ali, 2007, Textbook of Statistics in Sports, Department of Sports Education-Unesa, Surabaya* | 8% |
| 9 | Skilled in creating and calculating Pearson Correlation tests using SPSS | Able to create and calculate the Pearson Correlation Test using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done<br><br>**Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** create and calculate the Pearson Correlation test using SPSS<br>**Reader:** *Field, Andy, 2009. Discovering Statistics Using SPSS, London. SAGE Publications.* | 5% |

| 10 | Skilled in creating and calculating multiple correlation tests using SPSS | Able to create and calculate multiple correlation tests using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done<br><br>**Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** create and calculate multiple correlation tests using SPSS **Library:** *Hendikawati, P. (2012). Development of SPSS-Based Statistics Textbooks. 8(2), 163–174.* | 5% |
|---|---|---|---|---|---|---|---|
| 11 | Skilled in processing and interpreting simple regression tests using SPSS | Able to process and interpret simple regression tests using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done<br><br>**Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** simple regression test using SPSS **Reference:** *Hendikawati, P. (2012). Development of SPSS-Based Statistics Textbooks. 8(2), 163–174.* | 5% |
| 12 | Skilled in processing data and interpreting non-parametric correlation tests using SPSS | Able to process data and interpret non-parametric correlation tests using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done<br><br>**Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** non-parametric correlation test using SPSS **Reference:** *Hendikawati, P. (2012). Development of SPSS-Based Statistics Textbooks. 8(2), 163–174.* | 5% |
| 13 | Skilled in processing data and interpreting the Wilcoxon Test using SPSS | Able to process data and interpret the Wilcoxon Test using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done<br><br>**Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** Wilcoxon Test using SPSS **Reference:** *Hendikawati, P. (2012). Development of SPSS-Based Statistics Textbooks. 8(2), 163–174.* | 5% |
| 14 | Skilled in processing data and interpreting the non-parametric Mann-Whitney U Test using SPSS | Able to process data and interpret non-parametric Mann-Whitney U Test using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done<br><br>**Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** non-parametric Mann-Whitney U Test using SPSS **Library:** *Hendikawati, P. (2012). Development of SPSS-Based Statistics Textbooks. 8(2), 163–174.* | 8% |
| 15 | Skilled in processing data and interpreting the Kruskal Wallis Test using SPSS | Able to process data and interpret the Kruskal Wallis Test using SPSS | **Criteria:** score 4 if done very well score 3 if done well score 2 if done fairly score 1 if not done<br><br>**Form of Assessment** : Participatory Activities, Practice/Performance | Lectures, assignments, group discussions, class discussions 2 x 50 | | **Material:** Kruskal Wallis Test using SPSS **Library:** *Hendikawati, P. (2012). Development of SPSS-Based Statistics Textbooks. 8(2), 163–174.* | 10% |

| 16 | UAS | able to understand meeting material 1-15 | **Criteria:** You get a score of 100 if you get all the questions right<br><br>**Form of Assessment :** Participatory Activities | 2 X 50 | | **Material:** UAS **Library:** *Maksum, Ali, 2007, Textbook of Statistics in Sports, Department of Sports Education-Unesa, Surabaya* | 10% |

**Evaluation Percentage Recap: Case Study**

| No | Evaluation | Percentage |
|---|---|---|
| 1. | Participatory Activities | 53.84% |
| 2. | Project Results Assessment / Product Assessment | 7.34% |
| 3. | Practice / Performance | 35.84% |
| 4. | Test | 3% |
| | | 100% |

**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.