| | Universitas Negeri Surabaya<br>Faculty of Sports and Health Sciences<br>Bachelor of Sports Science Study Program | Document Code |
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# SEMESTER LEARNING PLAN

| Courses | CODE | Course Family | Credit Weight | | | SEMESTER | Compilation Date |
|---|---|---|---|---|---|---|---|
| Sports Biomechanics | 8920104022 | | T=4 | P=0 | ECTS=6.36 | 5 | July 17, 2024 |

| AUTHORIZATION | SP Developer | Course Cluster Coordinator | Study Program Coordinator |
|---|---|---|---|
| | ..... | ..... | Dr. Heri Wahyudi, S.Or., M.Pd. |

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| **Learning model** | **Project Based Learning** |
| **Program Learning Outcomes (PLO)** | **PLO study program that is charged to the course** |
| | **Program Objectives (PO)** |
| | **PLO-PO Matrix** |

| | P.O |
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**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 |

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| **Short Course Description** | Discussion of the laws of kinetics and kinematics of motion mechanics, both linear and angular or mixed motion in relation to sports activities, so that you can carry out motion analysis with Dartfish software, to improve performance and prevent injury. |
| **References** | **Main :** |

1. Bartlett, Roger. 2003. Introduction to Sports Biomechanics . Oxford: Alden Press.
2. Ellen Kreighbaum, Katharine Barthels M. 1990. Biomechanics A Qualitative Approach For Studying Human Movemen t. Canada: Macmillan Pub.Co.
3. Giancoli Douglas C. 1998. Physics Principle with Application. USA: Prentice Hall Inc.
4. McGinnis Peter M., 2005, Biomechanics of Sport And Exercise. USA: Human Kinetics.

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| | **Supporters:** |
| **Supporting lecturer** | Dr. Achmad Widodo, M.Kes.<br>Dr. Joesoef Roepajadi, M.Pd.<br>Catur Supriyanto, S.Pd., M.Kes., Ph.D.<br>Dr. Abdul Aziz Hakim, S.Or., M.Or.<br>Awang Firmansyah, S.Or., M.Kes.<br>Nur Luthfiatus Solikah, S.Pd., M.Or. |

| 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) |

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| **1** | The nature and scope of Basic Sports Biomechanics | Students are able to understand, master and explain the essence and scope of Basic Sports Biomechanics | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **2** | Understanding Linear Kinetics | Students are able to understand, master and explain Linear Kinetics | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **3** | Understanding Linear Kinetics | Students are able to understand, master and explain Linear Kinetics | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **4** | Angular Kinetics of Human Motion | Students are able to understand, master and explain Angular Kinetics of Human Movement | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **5** | Understanding the Angular Kinetics of Human Movement | Students are able to understand, master and explain Angular Kinetics of Human Movement | **Criteria:** : Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **6** | Understanding Linear Kinematics | Students are able to understand, master and explain the concept of Linear Kinematics | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **7** | Understanding Linear Kinematics (continued) | Students are able to understand, master and explain the concept of Linear Kinematics (continued) | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **8** | Understanding Linear Kinematics (continued) | Students understand, master and explain the concept of Linear Kinematics (continued) | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **9** | UTS | UTS | | 4 X 50 | | | 0% |
| **10** | Understand the Angular Kinematics process | Students are able to understand, master and explain the concept of Angular Kinematics | **Criteria:** Written assessment | Lectures, discussions and practice questions on 4 X 50 | | | 0% |
| **11** | Understanding the Biomechanics process of Water Sports | Students are able to understand, master and explain the concept of Water Sports Biomechanics | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |

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| **12** | Understanding the Water Sports Biomechanics process (continued) | Students are able to understand, master and explain the concept of Water Sports Biomechanics (continued) | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **13** | Understanding Anatomical and Physiological processes in Human Movement | Students are able to understand, master and explain anatomical and physiological concepts in human movement | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **14** | Understanding the Sports Kinesiology Process | Students are able to understand, master and explain the concept of the Sports Kinesiology Process | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **15** | Understanding the Sports Kinesiology Process | Able to understand, master and explain the Concept of the Sports Kinesiology Process (continued) | **Criteria:** Written assessment | Lectures, discussions and questions and answers 4 X 50 | | | 0% |
| **16** | UAS | UAS | | 4 X 50 | | | 0% |

**Evaluation Percentage Recap: Project Based Learning**

| 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.