	Universitas Negeri Surabaya Vocational Faculty , D4 Sports Coaching Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Biomechanics	99998520202031		T=1	P=1	ECTS=3.18	8	July 16, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Dr. Kunjung Ashadi, S.Pd., M.Fis., AIFO.

Learning model	**Project Based Learning**	
Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**	
	PLO-5	Have devotion to God Almighty and be able to show a religious attitude
	PLO-9	Able to demonstrate quality and measurable performance
	PLO-13	Able to identify ways to increase individual fitness levels, identify athletes' talents in anthropometric and physical components and develop athletes' talents according to the stage of growth and development and the needs of the sport
	PLO-18	Have the ability to think critically and be visionary in formulating and developing knowledge in the field of sports physical training related to fitness, special needs and sports achievements in a series of efforts to improve the level of health and fitness for society, sports communities and athletes
	Program Objectives (PO)	
	PLO-PO Matrix	

P.O	PLO-5	PLO-9	PLO-13	PLO-18

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 discusses the basics of biomechanics in movement which consists of center of gravity, balance, motion, force, strength, speed, acceleration, angular speed, principles of force, resistance, moment, and force. Lectures are carried out with presentations, discussions and lectures. Assessment includes written tests, assignments and practice.	
References	**Main :**	

1. Albernety, Bruce, et.al. 1997. The Biophysical Foundations of Human Movement , Australia : Human Kinetics.
2. Bartlett, Roger. 1997. Introduction to Sports Biomechanics , London: E & FN: Spon, An Imprint of Chapman & Hall
3. Carr, Gerry. 1997. Mechanics of sport, A Practioner 19s Guide . America: Human Kinetics.
4. Hidayat, Imam. 1997. Biomekanika , Diktat, FPOK-IKIP Bandung.

Supporters:

Supporting lecturer	I Dewa Made Aryananda Wijaya Kusuma, S.Pd., M.Or. Dr. Donny Ardy Kusuma, S.Pd., M.Kes. Afif Rusdiawan, S.Pd., M.Kes. Dio Alif Airlangga Daulay, S.Pd., M.Pd.

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 understand the role of biomechanics in sports	Explain and master the role of biomechanics in sports	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities, Portfolio Assessment	Discussion 3 X 50			2%
2	Able to understand types of biomechanical analysis and their application in coaching	Explain and identify types of biomechanical analysis and their application in coaching	**Form of Assessment** : Participatory Activities	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			3%
3	Able to understand the definition of movement in sports	Explain and master the definition of movement in sports	**Criteria:** Complete assignments are accompanied by videos including references **Form of Assessment** : Practice/Performance, Test	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			5%
4	Able to understand the definition of movement in sports	Explain and master the definition of movement in sports	**Criteria:** Complete assignments are accompanied by videos including references **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			5%
5	Able to understand the definition of style	Explain and master the definition of style	**Form of Assessment** : Participatory Activities	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			5%
6	Able to understand the definition of style	Explain and master the definition of style	**Form of Assessment** : Participatory Activities	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			5%
7	Able to understand the definition of strength	Explain and master the definition of strength	**Form of Assessment** : Participatory Activities	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			5%
8	Midterm exam		**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Test	3 X 50			15%
9	Able to understand speed and acceleration	Explain and master speed and acceleration	**Form of Assessment** : Participatory Activities	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			5%
10	Able to understand speed and acceleration	Explain and master speed and acceleration	**Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			10%
11	Able to understand the principles of mechanics in sports	Explain and master the principles of mechanics in sports	**Form of Assessment** : Participatory Activities	Lectures, Discussions, Presentations and Questions and Answers 2 X 50			5%
12	Able to understand the definition of angular	Explain and master angular speed	**Form of Assessment** : Participatory Activities	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			5%

13	Able to understand the basics of movement styles in sports	Explain and master the principles of style in sports movements	**Form of Assessment** : Participatory Activities	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			5%
14	Able to understand the definition of prisoner	Describe and control prisoners	**Form of Assessment** : Practice / Performance	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			5%
15	Able to understand moments and levers	Explain and master moments and levers	**Form of Assessment** : Project Results Assessment / Product Assessment	Lectures, Discussions, Presentations and Questions and Answers 3 X 50			5%
16			**Form of Assessment** : Test				15%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	46.5%
2.	Project Results Assessment / Product Assessment	12.5%
3.	Portfolio Assessment	1%
4.	Practice / Performance	7.5%
5.	Test	32.5%
		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.