



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
Ergonomics and Sports Rehabilitation	8920102243		T=2	P=1	ECTS=4.77	6	July 17, 2024
AUTHORIZATION	SP Developer		Course Cluster Coordinator			Study Program Coordinator	
			Dr. Heri Wahyudi, S.Or., M.Pd.	
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					
Short Course Description	<p>Mastering the study of basic concepts of ergonomics and sports rehabilitation which includes: Basic concepts of introduction to ergonomics, ergonomic models and training modes in sports and outdoor recreation, competitive stress and training in sports, the importance of fitness for workers, sports equipment and playing fields that can be used, work - related work-related low back pain from biomechanical factors and primary prevention, ergonomics, sports in special populations including aging and ergonomics, holistic nutritional perspective of ergonomics, extremity musculoskeletal disorders and ergonomic interventions, ergonomic risk assessment for upper extremity musculoskeletal disorders, neck musculoskeletal disorders and shoulders and ergonomic interventions, clinical aspects of sports ergonomics, wheelchair ambulation from a biomechanical perspective and ergonomic considerations, effective use of assistive devices and current design of rehabilitation aids. Lectures are conducted to measure the achievement of learning competencies using a problem-based learning approach, project-based learning, discussions, questions and answers, assignments. The problem-based learning approach requires students to be able to discuss solving problems and present in groups and prepare reports well. Assessment is carried out by performance, written tests and portfolios.</p>						
	Main :						
	<ol style="list-style-type: none"> 1. Kumar, S. (Ed.). (2009). Ergonomics for rehabilitation professionals. CRC Press. 2. Reilly, T. (2010). Ergonomics in sport and physical activity: Enhancing performance and improving safety. Human Kinetics. 3. Reilly, T., & Atkinson, G. (Eds.). (2009). Contemporary sport, leisure, and ergonomics . Routledge. 4. Hulme, A., Thompson, J., Plant, K. L., Read, G. J. M., Mclean, S., Clacy, A., & Salmon, P. M. (2019). Applying systems ergonomics methods in sport: A systematic review. Applied Ergonomics , 8 0 , 214–225. https://doi.org/10.1016/j.apergo.2018.03.019 5. Paul M Salmon, Anne-Claire Macquet. Human Factors and Ergonomics in Sport and Outdoor Recreation: From individuals and their equipment to complex sociotechnical systems and their frailties. Applied Ergonomics, 2019, 80, pp.209-213.10.1016/j.apergo.2018.08.027. 6. Salmon, P. M., & Macquet, A.-C. (2019). Human Factors and Ergonomics in Sport and Outdoor Recreation: From individuals and their equipment to complex sociotechnical systems and their frailties. Applied Ergonomics , 80 , 209–213. https://doi.org/10.1016/j.apergo.2018.08.027 						
	Supporters:						

Supporting lecturer		Anna Noordia, S.TP., M.Kes. dr. Ananda Perwira Bakti, M.Kes. I MADE WIJAYA Yetty Septiani Mustar, S.KM., M.P.H.					
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 introduction of ergonomics	1.1 Explain the basic concepts of ergonomics 1.2 Explain the objectives of applying ergonomics 1.3 Explain the concept of balance in ergonomics		2 X 50			0%
2	Able to explain ergonomic models and training modes in outdoor sports and recreation	2.1 Explain the concept of adaptation to the environment, including: Adaptation, acclimation, Acclimatization, Habituation 2.2 Explain heat adaptation 2.3 Explain heat disorders including: heat cramps, heat exhaustion, heat stroke 2.4 Explain heat therapy		Learning Form: Face-to-face lecture Learning Method: Lecture, discussion and question and answer 2 X 50			0%
3	Able to analyze competitive and training stress in sports	3.1. Explain hydration terminology 3.2. Explain the impact of fluid balance on OR performance 3.3. Explain dehydration and hyponatremia 3.4. Explaining Workout Hydration Strategies		Learning Form: Face-to-face lecture Learning Method: Lecture, discussion and question and answer 2 X 50			0%
4	Able to understand the importance of fitness for workers, sports equipment and playing fields	Explaining hypothermia 4.2. Explain the physiological response to cold exposure: Shivering Thermogenesis and Nonshivering Thermogenesis 4.3. Explain exercise in exposure to cold air. Explain cold injury to the extremities		2 X 50			0%
5	Able to analyze work-related low back pain from biomechanical factors and primary prevention	5.1 Explain accidental immersion in cold water. 5.2 Explain the phases that occur when the body is immersed in cold water: - Immersion and cold shock - Muscle failure - Hypothermia Postrescue Collapse		2 X 50			0%

6							0%
7							0%
8							0%
9							0%
10							0%
11							0%
12							0%
13							0%
14							0%
15							0%
16							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.**