



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

Document Code

**SEMESTER LEARNING PLAN**

<b>Courses</b>	<b>CODE</b>	<b>Course Family</b>	<b>Credit Weight</b>			<b>SEMESTER</b>	<b>Compilation Date</b>
PERFORMANCE NUTRITION AND ERGONICS AIDS	8920102226		T=2	P=0	ECTS=3.18	1	July 17, 2024
<b>AUTHORIZATION</b>	<b>SP Developer</b>		<b>Course Cluster Coordinator</b>			<b>Study Program Coordinator</b>	
	.....		.....			Dr. Heri Wahyudi, S.Or., M.Pd.	
<b>Learning model</b>	Project Based Learning						
<b>Program Learning Outcomes (PLO)</b>	PLO study program that is charged to the course						
	Program Objectives (PO)						
	PLO-PO Matrix						
		P.O					
<b>Short Course Description</b>	This course discusses athlete performance and the current understanding of the most widely used nutritional ergogenic aids; dietary supplements to improve physical and athletic performance. The discussion includes the definition and regulation of ergogenic aids nutrition, amino acid derivatives, fat derivatives, other substances in other foods and evaluation of effectiveness. Covers the physical aspects of supplement use, the psychological effects on users and discusses various government regulations. Lectures are conducted to measure the achievement of learning competencies using a problem based learning approach, discussions, questions and answers, assignments. Assessment is carried out by performance, written tests and portfolios						
	<b>References</b>						
<b>Supporting lecturer</b>	<b>Main :</b>						
	1. Mike Greenwood, Matthew B. Cooke, Tim Ziegenfuss, Douglas S. Kalman, Jose Antonio. 2015. Nutritional Supplements in Sports and Exercise. Springer International Publishing Switzerland. 2. Ira Wolinsky, Judy A. Driskell. 2004. Nutritional Ergogenic Aids. CRC Press LLC 3. Ira Wolinsky, Judy A. Driskell. 2000. Nutritional Applications in Exercise and Sport. CRC Press LLC						
<b>Supporters:</b>							
Anna Noordia, S.TP., M.Kes. 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 analyze basic concepts of nutrition for physical and athletic performance	<ol style="list-style-type: none"> <li>1.Explain the basic concepts of nutrition</li> <li>2.Explain the concepts of physical performance and athleticism</li> <li>3.Explain the link between nutrition and physical and athletic performance</li> </ol>		<p>Learning Form: Face-to-face lecture  Learning Method: Lecture, discussion and question and answer  Student assignment  Independent assignment to search for literature related to basic concepts of nutrition for physical and athletic performance  2 X 50</p>		0%
2	Able to analyze ergogenic aids and their regulations	<ol style="list-style-type: none"> <li>1.Explain the concept of ergogenic aids</li> <li>2.Explain the regulation of ergogenic aids</li> </ol>		<p>Learning Form: Face-to-face lecture  Learning Method: Lecture, discussion and question and answer  Student assignment  Independent task to search for literature related to the concept of ergogenic aids and its regulations  2 X 50</p>		0%
3	Able to analyze Arginine, Aspartate and branched chain Amino Acids	<ol style="list-style-type: none"> <li>1.Explaining Arginine</li> <li>2.Explain branched chain amino acids</li> <li>3.Explaining Aspartate</li> </ol>		<p>Learning Form: Face-to-face lecture  Learning Method: Lecture, discussion and question and answer  Student assignment  Independent assignment to search for literature related to Arginine, Aspartate and branched chain Amino Acids  2 X 50</p>		0%
4	Able to analyze Arginine, Aspartate and branched chain Amino Acids	<ol style="list-style-type: none"> <li>1.Explaining Arginine</li> <li>2.Explain branched chain amino acids</li> <li>3.Explaining Aspartate</li> </ol>		<p>Learning Form: Face-to-face lecture  Learning Method: Lecture, discussion and question and answer  Student assignment  Independent assignment to search for literature related to Arginine, Aspartate and branched chain Amino Acids  2 X 50</p>		0%

5	Able to analyze Carnitine, Creatine and Gelatin	<ol style="list-style-type: none"> <li>1.Explain the meaning of Carnitine, Creatine and Gelatin</li> <li>2.Explain the types and characteristics of Carnitine, Creatine and Gelatin</li> <li>3.Explain the interactions between Carnitine, Creatine and Gelatin</li> </ol>		<p>Learning Form: Face-to-face lecture  Learning Method: Lecture, discussion and question and answer  Student assignment  Independent task to search for literature related to Carnitine, Creatine and Gelatin  2 X 50</p>		0%
6	Able to analyze Carnitine, Creatine and Gelatin	<ol style="list-style-type: none"> <li>1.Explain the meaning of Carnitine, Creatine and Gelatin</li> <li>2.Explain the types and characteristics of Carnitine, Creatine and Gelatin</li> <li>3.Explain the interactions between Carnitine, Creatine and Gelatin</li> </ol>		<p>Learning Form: Face-to-face lecture  Learning Method: Lecture, discussion and question and answer  Student assignment  Independent task to search for literature related to Carnitine, Creatine and Gelatin  2 X 50</p>		0%
7	Able to understand Glutamine, Glucosamine and chondroitine sulfate	<ol style="list-style-type: none"> <li>1.Explain the meaning of Glutamine, Glucosamine and chondroitine sulfate</li> <li>2.Explain the types of reactions of Glutamine, Glucosamine and chondroitine sulfate</li> <li>3.Explain the types of Glutamine, Glucosamine and chondroitine sulfate</li> </ol>		<p>Learning Form: Face-to-face lecture  Learning Method: Lecture, discussion and question and answer  Student assignment  Independent task to search for literature related to Glutamine, Glucosamine and chondroitine sulfate  2 X 50</p>		0%
8	UTS			2 X 50		0%
9	Able to analyze Lysine, Ornithine, Taurine and b Hydroxymethylbutyrate	<ol style="list-style-type: none"> <li>1.Explain the role of Lysine, Ornithine, Taurine and b Hydroxymethylbutyrate</li> <li>2.Explain the interactions of Lysine, Ornithine, Taurine and b Hydroxymethylbutyrate</li> </ol>		<p>Learning Form: Face-to-face lecture  Learning Method: PBL  2 X 50</p>		0%
10	Able to analyze Lysine, Ornithine, Taurine and b Hydroxymethylbutyrate	<ol style="list-style-type: none"> <li>1.Explain the role of Lysine, Ornithine, Taurine and b Hydroxymethylbutyrate</li> <li>2.Explain the interactions of Lysine, Ornithine, Taurine and b Hydroxymethylbutyrate</li> </ol>		<p>Learning Form: Face-to-face lecture  Learning Method: PBL  2 X 50</p>		0%

11	Able to analyze conjugated linoleic acid, triglycerides and glycerol	<ol style="list-style-type: none"> <li>1.Explain conjugated linoleic acid, triglycerides and glycerol</li> <li>2.Explain the interaction of conjugated linoleic acid, triglycerides and glycerol</li> </ol>		Learning Form: Face-to-face lecture Learning Method: PBL 2 X 50			0%
12	Able to analyze other substances in food that can act as ergogenic aids	<ol style="list-style-type: none"> <li>1.Explain the role of other substances in food that can act as ergogenic aids</li> <li>2.Explain the interactions of other substances in food that can act as ergogenic aids</li> </ol>		Learning Form: Face-to-face lecture PBL method Student assignment Independent assignment to search for literature related to other substances in food that can act as ergogenic aids 2 X 50			0%
13	Able to analyze other substances in food that can act as ergogenic aids	<ol style="list-style-type: none"> <li>1.Explain the role of other substances in food that can act as ergogenic aids</li> <li>2.Explain the interactions of other substances in food that can act as ergogenic aids</li> </ol>		Learning Form: Face-to-face lecture PBL method Student assignment Independent assignment to search for literature related to other substances in food that can act as ergogenic aids 2 X 50			0%
14	Able to evaluate the benefits and risks of using ergogenic aids	<ol style="list-style-type: none"> <li>1.Explain the advantages of using ergogenic aids</li> <li>2.Explain the risks of using ergogenic aids</li> </ol>		Learning Form: Face-to-face lecture Learning Method: Lecture, discussion and question and answer Student assignment Independent assignment to search for literature related to the benefits and risks of ergogenic aids 2 X 50			0%
15	Able to evaluate the benefits and risks of using ergogenic aids	<ol style="list-style-type: none"> <li>1.Explain the advantages of using ergogenic aids</li> <li>2.Explain the risks of using ergogenic aids</li> </ol>		Learning Form: Face-to-face lecture Learning Method: Lecture, discussion and question and answer Student assignment Independent assignment to search for literature related to the benefits and risks of ergogenic aids 2 X 50			0%
16	UAS			2 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.