	Universitas Negeri Surabaya Faculty of Sports and Health Sciences S1 Sports Coaching Education Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Sports Nutrition Science	8520202079	Compulsory Study Program Subjects	T=2	P=0	ECTS=3.18	4	August 1, 2023

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
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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)
	PO - 1 Students can understand Balanced Nutrition Patterns for athletes and humans in general and can master theoretical concepts about Sports Nutrition.
	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 food in relation to health and exercise. Discusses the nutrients needed by the body, food and nutritional content and their functions. Metabolism of nutrients, energy in the body, nutritional needs of athletes, as well as calculating the needs and planning the adequacy of nutrients recommended for physical activity of athletes before, during and after matches through lectures and discussions.
References	**Main :**

1. Irianto, Djoko Pekik. 2007. Panduan Gizi Lengkap Keluarga dan Olahragawan . Yogyakarta: Penerbit Andi Offset
2. Almatzier, Sunita. 2001. Prinsip Dasar Ilmu Gizi . Jakarta : PT. Gramedia Pustaka Utama.
3. Bean A. 2009. Sports Nutrition . London: A & C Black Publishers Ltd.
4. Clark, Nancy. 1996. Sport Nutrition Guide-Book . USA: Brookline 830 Boylston St. Brookline. MA 02167.
5. Moehji, Sjahmien. 2003. Ilmu Gizi . Jilid 1 dan 2. Jakarta : PT. Bhratara Niaga Media.
6. Muchtadi D. 2008. Pengantar Ilmu Gizi . Bandung: Penerbit Alfabeta.
7. Suharjo-Clara M. 1992. Prinsip-Prinsip Ilmu Gizi . Yogyakarta : Kanisius
8. Anna Noordia, Agus Hariyanto, Raymond Ivano Avandi. 2020. ILMU GIZI OLAHRAGA Dasar-Dasar Pengukuran Dan Perhitungan Bagi Praktisi Olahraga. Sidoarjo : Zifatama Jawara.

Supporters:

1. Jurnal Penelitian dan Artikel yang memenuhi persyaratan keilmuan

Supporting lecturer	Prof. Dr. Agus Hariyanto, M.Kes. dr. Azizati Rochmania, Sp.KFR. Raymond Ivano Avandi, S.Pd., M.Kes. Dr. Or. Muhammad, S.Pd., M.Pd. dr. Ariesia Dewi Ciptorini, Sp.N. I Dewa Made Aryananda Wijaya Kusuma, S.Pd., M.Or. Yanuar Alfan Triardhana, S.Or., 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	Understand the concept of sports nutrition, nutrients, functions and sources of	1. Able to explain general concepts and	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and	lecture, discussion	Lectures, discussions and questions and answers 3 X 50	**Material:** Understand the concept of sports	5%

		nutrients as well as the amount and adequacy of nutrients	principles of sports nutrition 2. Be able to state the classification of nutrients 3. Able to determine the function and source of nutrients for athletes 4. Able to determine the recommended adequate amount of nutrients	sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities, Portfolio Assessment			nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reader:** *Irianto, Djoko Pekik. 2007. Complete Nutrition Guide for Families and Athletes. Yogyakarta: Andi Offset Publishers* **Material:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **References:** *Almatzier, Sunita. 2001. Basic Principles of Nutrition Science. Jakarta : PT. Gramedia Pustaka Utama.* **Material:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reference:** *Bean A. 2009. Sports Nutrition. London: A & C Black Publishers Ltd.* **Material:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **References:** *Clark, Nancy. 1996. Sport Nutrition Guide-Book. USA: Brookline 830 Boylston St. Brookline. MA 02167.* **Material:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as		

						well as the amount and adequacy of nutrients. **References:** *Moehji, Sjahmien. 2003. Nutrition Science. Volumes 1 and 2. Jakarta : PT. Bhratara Niaga Media.* **Material:** Understanding the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reference:** *Muchtadi D. 2008. Introduction to Nutrition Science. Bandung: Alphabeta Publishers.* **Material:** Understanding the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reference:** *Suharjo-Clara M. 1992. Principles of Nutrition Science. Yogyakarta: Kanisius* **Material:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Readers:** *Anna Noordia, Agus Hariyanto, Raymond Ivano Avandi. 2020. SPORTS NUTRITION SCIENCE Basics of Measurement and Calculation for Sports Practitioners. Sidoarjo: Zifatama Champion.*		

2	Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients	1. Able to explain general concepts and principles of sports nutrition 2. Be able to state the classification of nutrients 3. Able to determine the function and source of nutrients for athletes 4. Able to determine the recommended adequate amount of nutrients	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities, Portfolio Assessment	Lectures, discussions and questions and answers 3 X 50		**Material:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reader:** *Irianto, Djoko Pekik. 2007. Complete Nutrition Guide for Families and Athletes. Yogyakarta: Andi Offset Publishers* **Material:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **References:**	5%
3	Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients	1. Able to explain general concepts and principles of sports nutrition 2. Be able to state the classification of nutrients 3. Able to determine the function and source of nutrients for athletes 4. Able to determine the recommended adequate amount of nutrients	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities	Lectures, discussions and questions and answers 3 X 50		**Material:** the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reader:** *Irianto, Djoko Pekik. 2007. Complete Nutrition Guide for Families and Athletes. Yogyakarta: Andi Offset Publishers*	5%
4	Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients	1. Able to explain general concepts and principles of sports nutrition 2. Be able to state the classification of nutrients 3. Able to determine the function and source of nutrients for athletes 4. Able to determine the recommended adequate amount of nutrients	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities	Lectures, discussions and questions and answers 3 X 50		**Material:** the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reader:** *Irianto, Djoko Pekik. 2007. Complete Nutrition Guide for Families and Athletes. Yogyakarta: Andi Offset Publishers*	5%

5	Understand the concept of metabolism	1. Able to explain the concept of metabolism 2. Able to explain the concept of basal metabolism 3. Be able to detail the factors that influence basal metabolic rate 4. Able to use the Haris-Benedict formula 5. Able to calculate basal metabolic rate based on the Haris-Benedict formula 6. Able to describe and explain the metabolic processes of carbohydrates, proteins and fats	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities	Lecture Discussion Questions and answers 3 X 50		**Material:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reference:** *Bean A. 2009. Sports Nutrition. London: A & C Black Publishers Ltd.*	5%
6	Understand how to calculate energy needs based on SDA values and physical activity	1. Able to explain Specific Dynamic Action (SDA) 2. Able to explain physical activity and its criteria 3. Able to determine the value of physical activity 4. Able to analyze daily energy needs and total energy 5. Able to calculate energy needs based on physical activity, SDA and BMR	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities	LectureDiscussionQuestions and answersPractice 3 X 50		**Material:** The concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **References:** *Moehji, Sjahmien. 2003. Nutrition Science. Volumes 1 and 2. Jakarta : PT. Bhratara Niaga Media.*	5%
7	Understand how to calculate energy needs based on SDA values and physical activity	1. Able to explain Specific Dynamic Action (SDA) 2. Able to explain physical activity and its criteria 3. Able to determine the value of physical activity 4. Able to analyze daily energy needs and total energy 5. Able to calculate energy needs based on physical activity, SDA and BMR	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities	LectureDiscussionQuestions and answersPractice 3 X 50		**Material:** The concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reference:** *Muchtadi D. 2008. Introduction to Nutrition Science. Bandung: Alphabeta Publishers.*	5%

8	UTS	Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities, Tests	UTS 3 X 50		**Material:** The concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reader:** *Irianto, Djoko Pekik. 2007. Complete Nutrition Guide for Families and Athletes. Yogyakarta: Andi Offset Publishers*	10%
9	Understand the concept of energy and energy balance	1. Able to explain the concept of energy 2. Able to calculate the energy content of food 3. Be able to explain energy balance	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities	LectureDiscussionQuestions and answersPractice 3 X 50		**Material:** The concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reference:** *Muchtadi D. 2008. Introduction to Nutrition Science. Bandung: Alphabeta Publishers.*	5%
10	Understand the calculation of food calorific value using the 24 Hours Dietary Recall method and the List of Food Ingredient Composition and Household Measures	1. Able to explain the calorific value of food 2. Able to calculate the calorific value of food 3. Able to carry out analysis of the 24 Hours Dietary Recall method 4. Able to calculate the calorie value of food using the 24 Hour Dietary Recall method 5. Able to use the List of Food Ingredient Composition and Household Measures 6. Able to analyze energy needs with food intake	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities	Discussion LectureTraining on the use of URT, DKBMMethod 24 Hours Dietary Recall 3 X 50		**Material:** The concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reference:** *Muchtadi D. 2008. Introduction to Nutrition Science. Bandung: Alphabeta Publishers.*	5%

11	Understand the relationship between nutrition, energy and athlete performance	Able to explain the relationship between nutrition, energy and athlete performance	**Criteria:** active participation **Form of Assessment** : Participatory Activities	Lecture Discussion Questions and answers 3 X 50		**Material:** The concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reader:** *Irianto, Djoko Pekik. 2007. Complete Nutrition Guide for Families and Athletes. Yogyakarta: Andi Offset Publishers*	5%
12	Understand the relationship between nutrition, energy and athlete performance	Able to explain the relationship between nutrition, energy and athlete performance	**Criteria:** active participation **Form of Assessment** : Participatory Activities	Lecture Discussion Questions and answers 3 X 50		**Material:** The concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reader:** *Irianto, Djoko Pekik. 2007. Complete Nutrition Guide for Families and Athletes. Yogyakarta: Andi Offset Publishers*	5%
13	Understand the concept of managing nutrition for achievement	1. Able to explain the concept of nutritional management for achievement 2. Able to explain the principles of meal management 3. Able to explain meal arrangements before the match, during the match and after the match 4. Able to evaluate food choices when in a foreign country	**Criteria:** active participation **Form of Assessment** : Participatory Activities	Lecture Discussion Questions and answers 3 X 50		**Material:** The concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reference:** *Bean A. 2009. Sports Nutrition. London: A & C Black Publishers Ltd.*	5%
14	Understanding the science of sports nutrition through problematic presentations	Able to present the science of sports nutrition through problematic presentations	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities	Discussion Presentation Questions and answers 3 X 50		**Material:** The concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **References:** *Moehji, Sjahmien. 2003. Nutrition Science. Volumes 1 and 2. Jakarta : PT. Bhratara Niaga Media.*	5%

15	Understanding the science of sports nutrition through problematic presentations	Able to present the science of sports nutrition through problematic presentations	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Form of Assessment** : Participatory Activities	Discussion Presentation Questions and answers 3 X 50		**Material:** the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reference:** *Bean A. 2009. Sports Nutrition. London: A & C Black Publishers Ltd.*	5%
16	UAS	Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients	**Criteria:** Understand the concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Tests	3 X 50		**Material:** The concept of sports nutrition, nutrients, functions and sources of nutrients as well as the amount and adequacy of nutrients. **Reference:** *Bean A. 2009. Sports Nutrition. London: A & C Black Publishers Ltd.*	20%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	76.67%
2.	Project Results Assessment / Product Assessment	6.67%
3.	Portfolio Assessment	5%
4.	Test	11.67%
		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.