



Universitas Negeri Surabaya
Faculty of Sports and Health Sciences,
Undergraduate Nutrition Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Sports Nutrition	1321102092	Community Nutrition	T=0	P=2	ECTS=3.18	5	August 16, 2022
AUTHORIZATION	SP Developer		Course Cluster Coordinator			Study Program Coordinator	
	Satwika Arya Pratama, S.Gz., M.Sc.		Choirul Anna Nur Afifah, S.Pd., M.Si.			Amalia Ruhana, S.P., M.P.H.	

Learning model	Case Studies																																	
Program Learning Outcomes (PLO)	PLO study program that is charged to the course																																	
	PLO-6 Able to utilize science and technology in self-development and solving nutritional problems.																																	
	PLO-9 Able to have an attitude of belief in the Almighty God, be ethical, disciplined, aware of the law, have a social and cultural insight, and behave professionally.																																	
	Program Objectives (PO)																																	
	PLO-PO Matrix																																	
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>P.O</td> <td>PLO-6</td> <td>PLO-9</td> </tr> </table>	P.O	PLO-6	PLO-9																														
P.O	PLO-6	PLO-9																																
	PO Matrix at the end of each learning stage (Sub-PO)																																	
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td rowspan="2">P.O</td> <td colspan="16">Week</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td> </tr> </table>	P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P.O	Week																																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																		

Short Course Description
 Discussion of the role of nutrition in various types of work and sports, nutritional needs based on work and athlete, athlete menu planning before, during and after competitions, supplements and doping. Learning activities are carried out through learning experiences, lectures, discussions and assignments.

References	<p>Main :</p> <ol style="list-style-type: none"> Burgess, A., Bijlsma, M., Ismael, C., & Ashworth, A. 2009. Community Nutrition: A Handbook for Health and Development Workers. Macmillan Education Maughan, R. J. 2013. Sports Nutrition. Wiley. Bean, A. 2017. The Complete Guide to Sports Nutrition: 8th edition. Bloomsbury Publishing. Jeukendrup, A., & Gleeson, M. 2018. Sport Nutrition-3rd Edition. Human Kinetics. Thomas, D. T., Erdman, K. A., & Burke, L. M. 2016. American college of sports medicine joint position statement. nutrition and athletic performance. Medicine and Science in Sports and Exercise, 48(3), 543–568. Wanjek, C., & Office, I. L. 2005. Food at Work: Workplace Solutions for Malnutrition, Obesity and Chronic Diseases. ILO. Almatsier, Sunita. 2001. Prinsip Dasar Ilmu Gizi. Jakarta : PT. Gramedia Pustaka Utama Purcell, L.K. 2013. Sport Nutrition for Young Athletes. Paediatrics and Child Health (Canada), 18 (4), 200-202. McArdle, W. K., & Katch, F. (n.d.). V. 2010. Exercise Physiology: Nutrition, Energy and Human Performance. Philadelphia, USA: Lippincott & Williams. Kuswari, Mury dkk. 2021. Panduan Pendampingan Gizi pada Atlet. Jakarta: Kementerian Kesehatan RI Penggalih, M. H. S. T., dkk. 2020. Gizi Olahraga I: Sistem Energi Antropometri dan Asupan Makan Atlet. Yogyakarta: UGM Press. Penggalih, M. H. S. T., Sofro, Z. M., & Solichah, K. M. 2021. Gizi Olahraga II: Respons Adaptasi Biokimia dan Fisiologi Atlet. Yogyakarta: UGM Press. <p>Supporters:</p>
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Supporting lecturer
 Raymond Ivano Avandi, S.Pd., M.Kes.
 Cleonara Yanuar Dini, S.Gz., Dietisien, M.Sc.
 Satwika Arya Pratama, S.Gz., M.Sc.

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	Students are able to explain basic knowledge of occupational and sports nutrition	<p>1.1 Carry out lecture contracts, lecture mechanisms and assessments</p> <p>2.2 Understand preliminary knowledge about occupational and sports nutrition</p> <p>3.3 Understand nutrition as an important factor in sports and work performance</p> <p>4.4 Understand career prospects in occupational and sports nutrition</p> <p>5.5 Project-based programs for the health and wellness of students and families</p>	<p>Criteria: Students get maximum marks if they answer questions correctly</p>	Face-to-face Lectures, Online Discussions and Questions and Answers (online) 2 X 50	Face-to-face Lectures, Online Discussions and Questions and Answers (online) 2 X 50	<p>Material: Introduction to Sports Nutrition References: <i>Maughan, RJ 2013. Sports Nutrition. Wiley.</i></p> <hr/> <p>Material: Introduction to Sports Nutrition Bibliography: <i>Bean, A. 2017. The Complete Guide to Sports Nutrition: 8th edition. Bloomsbury Publishing.</i></p> <hr/> <p>Material: Introduction to Sports Nutrition References: <i>Jeukendrup, A., & Gleeson, M. 2018. Sport Nutrition-3rd Edition. Human Kinetics.</i></p>	0%
2	Students are able to explain and measure the nutritional status of athletes	<p>1.1. Understand the energy metabolism system</p> <p>2.2. Understand the energy system and energy metabolism in sports</p> <p>3.3. Understand energy sources in sports</p> <p>4.4. Understand the energy system during exercise</p>	<p>Criteria: Students will get maximum marks if they answer questions correctly.</p>	Face to Face Lectures, Discussions and Questions and Answers 2 X 50	Face to Face Lectures, Discussions and Questions and Answers 2 X 50	<p>Material: Energy systems and metabolism in sports References: <i>McArdle, WK, & Katch, F. (nd). V. 2010. Exercise Physiology: Nutrition, Energy and Human Performance. Philadelphia, USA: Lippincott & Williams.</i></p> <hr/> <p>Material: Energy systems and metabolism in sports Reference: <i>Maughan, RJ 2013. Sports Nutrition. Wiley.</i></p> <hr/> <p>Material: Energy systems and metabolism in sports References: <i>Jeukendrup, A., & Gleeson, M. 2018. Sport Nutrition-3rd Edition. Human Kinetics.</i></p>	5%

3	Students explain nutritional arrangements for athletes in the endurance category	<p>1.1. Understand the definition of fitness</p> <p>2.2. Understand fitness classifications</p> <p>3.3. Understand the factors that influence fitness</p> <p>4.4. Understand body weight regulation</p> <p>5.5. Understand the measurement of physical activity and fitness levels</p>	<p>Criteria: Students get maximum marks if they answer questions correctly</p>	Face to Face Lectures, Discussions and Questions and Answers 2 X 50	Face to Face Lectures, Discussions and Questions and Answers 2 X 50	<p>Material: Physiology of fitness and weight management References: <i>Maughan, RJ 2013. Sports Nutrition. Wiley.</i></p> <hr/> <p>Material: Fitness physiology and body weight regulation References: <i>McArdle, WK, & Katch, F. (nd). V. 2010. Exercise Physiology: Nutrition, Energy and Human Performance. Philadelphia, USA: Lippincott & Williams.</i></p> <hr/> <p>Material: Fitness physiology and body weight regulation References: <i>Penggalih, MHST, et al. 2020. Sports Nutrition I: Anthropometric Energy Systems and Athletes' Food Intake. Yogyakarta: UGM Press.</i></p> <hr/> <p>Material: Fitness physiology and body weight management References: <i>Thomas, DT, Erdman, KA, & Burke, LM 2016. American college of sports medicine joint position statement. nutrition and athletic performance. Medicine and Science in Sports and Exercise, 48(3), 543–568.</i></p>	10%
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4	Explains nutritional arrangements for athletes in the strength/power category	<ol style="list-style-type: none"> 1.1. Understand the meaning of training periodization 2.2. Understand training periodization planning 3.3. Understand the role of nutrition in training periodization 4.4. Understand nutritional planning according to periodization 5.5. Understand the nutritional periodization during preparation, training and competition 6.6. Understand nutritional training at the end of the game season 	Criteria: Students get maximum marks if they can answer questions correctly	Face to Face Lectures, Discussions and Questions and Answers 2 X 50	Face to Face Lectures, Discussions and Questions and Answers 2 X 50	Material: The role of nutrition in training periodization Reference: <i>Bean, A. 2017. The Complete Guide to Sports Nutrition: 8th edition. Bloomsbury Publishing.</i> <hr/> Material: The role of nutrition in training periodization Reference: <i>Jeukendrup, A., & Gleeson, M. 2018. Sport Nutrition-3rd Edition. Human Kinetics.</i> <hr/> Material: The role of nutrition in exercise periodization Reference: <i>Penggalih, MHST, et al. 2020. Sports Nutrition I: Anthropometric Energy Systems and Athletes' Food Intake. Yogyakarta: UGM Press.</i> <hr/> Material: The role of nutrition in training periodization Reference: <i>Purcell, LK 2013. Sport Nutrition for Young Athletes. Paediatrics and Child Health (Canada), 18(4), 200-202.</i> <hr/> Material: The role of nutrition in training periodization Reference: <i>Kuswari, Mury et al. 2021. Guide to Nutrition Assistance for Athletes. Jakarta: Indonesian Ministry of Health</i>	10%
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5	Students are able to explain nutritional arrangements for team category athletes	<p>1.1. Understand the urgency of measuring athletes' nutritional status</p> <p>2.2. Understand the various anthropometric measurements for athletes</p> <p>3.3. Understand the measurement of nutritional status based on biochemical values for athletes</p> <p>4.4. Understand the measurement of pulse, RR, temperature in athletes</p> <p>5.5. Understand the history of eating and supplements in athletes</p> <p>6.6. Understand the socio-economic ecological considerations of athletes</p> <p>7.7. Explain the interpretation of anthropometric and somatotype measurements (entomorph, endomorph, exomorph)</p>	<p>Criteria: Students get maximum marks if they answer questions correctly</p> <p>Form of Assessment : Practical Assessment</p>	Face to Face Lectures, Discussions and Questions and Answers. Practice of measuring nutritional status of athletes 2 X 50		<p>Material: Measuring the Nutritional Status of Athletes</p> <p>References: <i>Penggali, MHST, et al. 2020. Sports Nutrition I: Anthropometric Energy Systems and Athletes' Food Intake. Yogyakarta: UGM Press.</i></p> <hr/> <p>Material: Measuring the Nutritional Status of Athletes</p> <p>References: <i>Kuswari, Mury et al. 2021. Guide to Nutrition Assistance for Athletes. Jakarta: Indonesian Ministry of Health</i></p> <hr/> <p>Material: Measuring the Nutritional Status of Athletes</p> <p>References: <i>Bean, A. 2017. The Complete Guide to Sports Nutrition: 8th edition. Bloomsbury Publishing.</i></p> <hr/> <p>Material: Measuring the Nutritional Status of Athletes</p> <p>References: <i>Thomas, DT, Erdman, KA, & Burke, LM 2016. American college of sports medicine joint position statement. nutrition and athletic performance. Medicine and Science in Sports and Exercise, 48(3), 543–568.</i></p>	10%
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6	Explains nutritional arrangements for athletes in the speed team category, measured sports and martial arts	<ol style="list-style-type: none"> 1. Understand the meaning of ergogenic aids 2. Understand the use of ergogenic aids to improve athlete performance 3. Understand the types of ergogenic aids that are legal and illegal for athletes 4. Understand the types of sports food 5. Understand the types of doping 	Criteria: Students get maximum marks if they answer questions correctly	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	Material: Ergogenic aid, sports foods, and doping Reference: <i>Bean, A. 2017. The Complete Guide to Sports Nutrition: 8th edition. Bloomsbury Publishing.</i> <hr/> Material: Ergogenic aid, sports foods, and doping Reference: <i>Purcell, LK 2013. Sport Nutrition for Young Athletes. Paediatrics and Child Health (Canada), 18(4), 200-202.</i> <hr/> Material: Ergogenic aid, sports foods, and doping Reference: <i>Maughan, RJ 2013. Sports Nutrition. Wiley.</i> <hr/> Material: Ergogenic aid, sports foods, and doping References: <i>McArdle, WK, & Katch, F. (nd). V. 2010. Exercise Physiology: Nutrition, Energy and Human Performance. Philadelphia, USA: Lippincott & Williams.</i>	10%
7	Conducting Project Based Program (PBL) Presentations 1	Presentation of monitoring and evaluation (money) results of 1 project-based program (PBL) for the health and fitness of students and families	Criteria: Students will get maximum marks if they can answer the questions correctly	Presentation (50') Discussion and Questions and Answers (50') 2 X 50			10%
8	UTS			2 X 50			20%

9	Explaining energy systems and metabolism in sports (MBKM-UNESA)	<p>1.Understanding the energy metabolism system in endurance athletes</p> <p>2.Understand the nutritional needs of endurance athletes before, during and after training/competition</p>	<p>Criteria: Students will get maximum marks if they can answer the questions correctly</p>	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	<p>Material: Nutrition management for athletes in the endurance category. Reference: <i>Maughan, RJ 2013. Sports Nutrition. Wiley.</i></p> <hr/> <p>Material: Nutrition management for athletes in the endurance category. Reference: <i>McArdle, WK, & Katch, F. (nd). V. 2010. Exercise Physiology: Nutrition, Energy and Human Performance. Philadelphia, USA: Lippincott & Williams.</i></p> <hr/> <p>Material: Nutrition management for athletes in the endurance category. Reference: <i>Bean, A. 2017. The Complete Guide to Sports Nutrition: 8th edition. Bloomsbury Publishing.</i></p> <hr/> <p>Material: Nutrition management for athletes in the endurance category. Reference: <i>Thomas, DT, Erdman, KA, & Burke, LM 2016. American college of sports medicine joint position statement. nutrition and athletic performance. Medicine and Science in Sports and Exercise, 48(3), 543–568.</i></p>	10%
10	Explaining the role of nutrition in training periodization (MBKM-UNESA)	<p>1.1. Understand the energy metabolism system in strength/power athletes</p> <p>2.2. Understand • Nutritional needs of strength/power athletes before, during and after training/competition</p>	<p>Criteria: Students will get maximum marks if they can answer the questions correctly</p>	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	<p>Material: Nutrition management for athletes in the strength/power category. Reference: <i>Maughan, RJ 2013. Sports Nutrition. Wiley.</i></p> <hr/> <p>Material: Nutrition management for athletes in the strength/power category.</p>	10%

Reference:
Bean, A. 2017. The Complete Guide to Sports Nutrition: 8th edition. Bloomsbury Publishing.

Material:
Nutrition management for athletes in the strength/power category.

Reference:
Jeukendrup, A., & Gleeson, M. 2018. Sport Nutrition-3rd Edition. Human Kinetics.

Material:
Nutrition management for athletes in the strength/power category.

Reference:
Purcell, LK 2013. Sport Nutrition for Young Athletes. Paediatrics and Child Health (Canada), 18(4), 200-202.

Material:
Nutritional arrangements for athletes in the strength/power category.

Reference:
Penggali, MHST, et al. 2020. Sports Nutrition I: Anthropometric Energy Systems and Athletes' Food Intake. Yogyakarta: UGM Press.

Material:
Nutrition management for athletes in the strength/power category.

Reference:
McArdle, WK, & Katch, F. (nd). V. 2010. Exercise Physiology: Nutrition, Energy and Human Performance. Philadelphia, USA: Lippincott & Williams.

11	Explain the food management system for athletes and companies (MBKM-UNESA)	<p>1. Understanding the energy metabolism system in athletes in the speed category, measured sports and martial arts</p> <p>2. Understand the nutritional needs of athletes in the speed category, measured sports and martial arts before, during and after training/competition</p>	<p>Criteria: Students will get maximum marks if they can answer the questions correctly</p>	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	<p>Material: Nutrition management for athletes in the speed category, measured sports and martial arts. Reference: <i>Maughan, RJ 2013. Sports Nutrition. Wiley.</i></p> <hr/> <p>Material: Nutrition management for athletes in the speed category, measured sports and martial arts. Reference: <i>Bean, A. 2017. The Complete Guide to Sports Nutrition: 8th edition. Bloomsbury Publishing.</i></p> <hr/> <p>Material: Nutrition management for athletes in the speed category, measured sports and martial arts. Reference: <i>Penggali, MHST, et al. 2020. Sports Nutrition I: Anthropometric Energy Systems and Athletes' Food Intake. Yogyakarta: UGM Press.</i></p>	10%
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12	Explain the physiology of fitness and body weight regulation (MBKM-UNIMED)	<p>1. Understanding the energy metabolism system in team category athletes</p> <p>2. Understand the nutritional needs of team category athletes before, during and after training/matches</p>	<p>Criteria: Students will get maximum marks if they can answer the questions correctly</p>	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	Face to Face Lecture, Discussion and Questions and Answers (100')	<p>Material: Nutrition management for team category athletes. Reference: <i>Maughan, RJ 2013. Sports Nutrition. Wiley.</i></p> <hr/> <p>Material: Nutrition management for team category athletes. Reference: <i>Bean, A. 2017. The Complete Guide to Sports Nutrition: 8th edition. Bloomsbury Publishing.</i></p> <hr/> <p>Material: Nutrition management for team category athletes. Reference: <i>Jeukendrup, A., & Gleeson, M. 2018. Sport Nutrition-3rd Edition. Human Kinetics.</i></p> <hr/> <p>Material: Nutritional arrangements for team category athletes. Reference: <i>Penggali, MHST, et al. 2020. Sports Nutrition I: Anthropometric Energy Systems and Athletes' Food Intake. Yogyakarta: UGM Press.</i></p> <hr/> <p>Material: Nutritional arrangements for team category athletes. Reference: <i>Kuswari, Mury et al. 2021. Guide to Nutrition Assistance for Athletes. Jakarta: Indonesian Ministry of Health</i></p>	10%
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13	Explaining ergogenic aids, hydration and athlete performance (MBKM-UNIMED)	<ol style="list-style-type: none"> 1. Understanding fluids and hydration for athletes 2. Understand fluid needs during and after training/matches 	Criteria: Students will get maximum marks if they can answer the questions correctly	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	Material: Fluid balance, hydration and athlete performance References: <i>Kuswari, Mury et al. 2021. Guide to Nutrition Assistance for Athletes. Jakarta: Indonesian Ministry of Health</i> <hr/> Material: Fluid balance, hydration and athlete performance References: <i>Thomas, DT, Erdman, KA, & Burke, LM 2016. American college of sports medicine joint position statement. nutrition and athletic performance. Medicine and Science in Sports and Exercise, 48(3), 543–568.</i> <hr/> Material: Fluid balance, hydration and athlete performance References: <i>Penggalih, MHST, Sofro, ZM, & Solichah, KM 2021. Sports Nutrition II: Biochemical Adaptation Response and Athletes' Physiology. Yogyakarta: UGM Press.</i> <hr/> Material: Fluid balance, hydration and athlete performance Reference: <i>Bean, A. 2017. The Complete Guide to Sports Nutrition: 8th edition. Bloomsbury Publishing.</i>	10%
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14	Explaining the optimization of increasing work productivity through organizing nutrition and exercise programs for workers (MBKM-UNIMED)	1.Explains food service management for athletes during the training phase 2.Explain food service management for athletes during the competition phase	Criteria: Students will get maximum marks if they can answer the questions correctly	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	Face to Face Lecture, Discussion and Questions and Answers (100') 2 X 50	Material: Food service management for athletes Reference: <i>Penggalih, MHST, et al. 2020. Sports Nutrition I: Anthropometric Energy Systems and Athletes' Food Intake. Yogyakarta: UGM Press.</i> Material: Food service management for athletes References: <i>Kuswari, Mury et al. 2021. Guide to Nutrition Assistance for Athletes. Jakarta: Indonesian Ministry of Health</i>	10%
15	Project Based Program (PBL) Presentation 2	Presentation of monitoring and evaluation (money) results of 2 project-based programs (PBL) for the health and fitness of students and families	Criteria: Students will get maximum marks if they can answer the questions correctly	Presentation (50') Discussion and Questions and Answers (50') 2 X 50			10%
16	FINAL EXAMS			2 X 50			0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Practical Assessment	10%
		10%

Notes

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Forms of assessment:** test and non-test.
- 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.
- 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.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- 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%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.