SEMESTER LESSON PLAN (RPS)

NUTRITION SCIENCE

Lecturer:
Dr. Cica Yulia, S. Pd, M. Si

CULINARY EDUCATION STUDY PROGRAM
DEPARTMENT OF FAMILY WELFARE EDUCATION
FACULTY OF TECHNOLOGY AND VOCATIONAL EDUCATION

UNIVERSITAS PENDIDIKAN INDONESIA

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	SEMESTER LESSON PLAN (RPS) NUTRITION SCIENCE	No. of Document : FPTK-UPI-RPS-E0751.55 Revision : 2nd Date : 28 October 2021 Page : 1 of .. Page
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Nutritional Science Lecturer	**TPK Prodi for Culinary Education**	**Chairwoman of Culinary Education Study Program**

SEMESTER LESSON PLAN (RPS)

1. Course Identity

Dept/Study Program Name	:	Culinary Education				
Name of Course	:	Nutrition Science				
Code of Course	:	BG 108				
Group of Course*)	:	MKU	MKDK	MKKF	MKKP	**MKKIPS**
SKS weight	:	2 SKS (Semester Credit Unit)				
Level	:	S1				
Semester	:	Odd/**Even**				

Prerequisite	:	-	
Status (Mandatory/Optional) *)	:	**Mandatory**	
Lecturer Name and Code	:	Dr. Cica Yulia, S.Pd, M.Si / 2411	

2. Course Description

This lecture discusses the basic concepts of nutrition, nutrients needed by the body, understanding energy and heat, food energy, basal metabolism and energy needs, the concept of nutritional status, the concept of adequacy and nutritional needs, food processing that occurs in the body includes tools digestion, digestion and absorption processes, metabolism of nutrients that occur in the body and metabolic interactions, understanding excretion that occurs in the body through the lungs, skin, kidneys,and intestines.

1. Study Program Learning Outcomes (SPLO)

S Demonstrate scientific, educative, and religious attitudes and behaviors contributing to improving the quality of life in society, nation, and state, based on academic norms and ethics

P3 Proficient in theoretical concepts of Culinary education

KU Can apply logical, critical, systematic, and innovative thinking in the context of science and technology development or implementation that pays attention to and applies humanities values corresponding their area of expertise.

KK3 Can apply various food processing in accordance with food processing principles

2. Course Learning Outcomes (CLO)

M1 Students can define the definition of nutrition science, the scope of nutrition science, and development of nutrition science
M2 Students can classify macro and micro nutrients the body needs
M3 Students can describe the concept of Energy; Energy and heat, and Food Energy
M4 Students can calculate and apply Basal Metabolism and energy requirements
M5 Students can calculate nutritional status
M6 Students can calculate energy needs and adequacy
M7 Students can learn the processing of food by the body and the digestive organs
M8 Students can analyze the concept of Metabolism
M9 Students can distinguish the excretory system according to the organs of the body

3. Description of Learning Plan

Minimum number of meeting is 16 (including MSE and UAS)

Meeting	Sub-CLO and Course Learning Outcome Indicators	Study Modules	Learning Format	Time	Assignment and Evaluation	References
1	● Sub-CLO: Explain the development of nutrition science (C2) ● Indicators: 1. Can explain the definition of nutrition according to several experts. 2. Can explain the scope of nutrition science 3. Can distinguish between nutrients and foodstuffs 4. Can explain the concept of nutrition science evolution. 5. Can find facts about the development of nutritional science from several decades.	Basic Concepts of Nutrition Science**:** 1. Definition of nutrition science 2. Scope of knowledge nutrition. 3. Nutrition science development	*Synchronous*: Meeting via zoom meeting *Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to the explanation from the lecturer, asking questions, doing assignments, and discussing.		Searching some learning resources related to the courses that are taught to be consulted with the lecturer Oral quiz Paper assignments related to the development of nutrition science at the end of class hours	1. Almatsier . S. 2002. *Prinsip Dasar Ilmu Gizi*. Jakarta : PT Gramedia Pustaka Utama. 2. Sulfianti. Penentuan Status Gizi. Yayasan Kita Menulis. 2021 3. Putra, Sitiatava R. Pengantar Ilmu Gizi dan Diet. Publisher : D-Medika. Jogyakarta. 2013. 4. Indra Ruswadi. Nutrition and Dietetic Science For Students. Indramayu: Adab Publisher. 2021

2	● Sub-CLO: Classifying nutrients (C3) ● Indicators: 1. Can distinguish the basic components of the nature of carbohydrates, proteins, and fats. 2. Can explain the properties of carbohydrates, proteins and fats. 3. Can explain the function of nutrients for the human body. 4. Can conceptualize food ingredients based on the characteristics of nutrients and their functions. 5. Can link several diseases with excess and deficiency of	Nutrients needed by the body: a. Carbohydrate b. Protein c. Fat	*Synchronous*: Meeting via zoom meeting *Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to explanations from lecturers, dividing discussion groups, and presentations, ask and answer, collect group handouts, discussing.		Seek some learning resources related to the courses taught to be consulted with the lecturer. Students prepare presentation modules according to group selection at the previous meeting. Quiz based on paper at the end of the lesson	1. Almatsier. S. 2002. *Basic Principles of Nutrition*. Jakarta : PT Gramedia Pustaka Utama. 2. Webster, Madden, Holdsworth. Nutrition & Dietics. 2nd Edition Medical Book Publisher. 2012 3. Frances Sizer, Whitney E. *Nutrition: Concepts and Controverseries*. Boston: Cengage Learning. 2018 4. Ahmad Suhaimi. Food, Nutrition, and Health. Yogyakarta: Deepublish Publisher. 2019

	nutrients in humans.					
3	● Sub-CLO: Classifying nutrients (C3) ● Indicators: 1. Can explain the basic components of vitamins, minerals, and water. 2. Can explain the properties of vitamins, minerals, and water. 3. Can explain the function of vitamins, minerals, and water. 4. Can explain the function of fiber for health 5. Can relate micro-nutrients with diseases.	Nutrients the body needs: a. Vitamin b. Minerals c. Water d. Fiber	*Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to the explanation from the lecturer, asking questions, doing assignments in the form of surveys to the surrounding area, such as stalls, food carts, etc. to explain the sources of vitamins and minerals, fiber, and water. discussing.		Seek some learning resources related to the courses taught to be consulted with the lecturer. Literature studies and studies of sources of macro-nutrients found in the surrounding area Oral quiz after learning.	1,2,3,4,5
4	● Sub-CLO:	Energy : a. Energy and heat	*Asynchronous*:		Seek some learning	1,2,3,4,5,6,7

	Calculate food energy (C3) ● Indicators: 1. Can explain the concepts of energy, heat, and food energy. 2. Can calculate the energy produced by food. Can apply energy calculations in daily activities 3. Can apply energy calculations in daily activities	b. Food Energy	Self study via spot.upi.edu Discussion forums (group discussion) Listening to the explanation from the lecturer, asking questions, doing assignments, and discussing.		resources related to the courses taught to be consulted with the lecturer. Students make a simple video as a form of tutorial on calculating energy	
5	● Sub-CLO: Analyze energy needs (C4) ● Indicators: 1. Can explain basal metabolism 2. Can determine BMR 3. Can determine an individual's energy needs.	Energy a. Basal metabolism b. Energy needs	*Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to the explanation from the lecturer, asking questions, doing assignments, and discussing.		Seek some learning resources related to the courses taught to be consulted with the lecturer.	6,7,8,9,10

6	● Sub-CLO: Can explain various kinds of nutritional status, definition, types of measurement and practical ways of assessing nutritional status. ● Indicators: 1. Can explain the definition of nutritional status 2. Can distinguish nutritional status assessment in a direct and indirect way 3. Can make nutritional status assessment classifications based on human development (infants, toddlers, school children, adolescents, adults, and elderly).	Nutritional Status : a. Definition of Nutritional Status b. Nutritional Status Assessment	*Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to lectures from lecturers, asking questions, doing assignments, and discussing. Practicing how to calculate nutritional status based on anthropometry, namely TB and BB, then calculating the nutritional status value based on a friend's BMI.		Make a paper related to nutritional status assessment. The report on the practice of calculating the nutritional status of students.	1,4,5,7,9,

	4. Can determine an individual's energy needs					
7	● Sub-CLO: Distinguish the concept of nutritional adequacy with nutritional needs (C2) ● Indicators: 1. Can explain the definition of NAR (Nutritional Adequacy Ratio) 2. Can explain the basis for determining the NAR 3. Can explain the composition of appropriate food for the body's needs. 4. Analyze at least 3 nutritional problems and how to address them	Nutritional adequacy and needs: 1. Definition of Nutrition Adequacy 2. NAR determination 3. 13 Basic Messages of Balanced Nutrition:	*Synchronous*: Meeting via zoom meeting *Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to lectures from lecturers, asking questions, doing assignments, and discussing.		Seek some learning resources related to the courses taught to be consulted with the lecturer.	1,2,3,4,5,6,7
8	**Mid-Term Exam**					
9	● Sub-CLO:	Nutritional adequacy and needs	*Synchronous*:		Seek some learning	1,3,5,7,9,10,12,13,

	Distinguish the concept of nutritional adequacy with nutritional needs (C2) ● Indicators: 1. Can explain the definition of NAR and nutritional needs 2. Can explain the basis for determining the NAR 3. Can explain the composition of appropriate food for the body's needs. 4. Can provide examples of healthy food menu 5. Analyze at least 3 nutritional problems and how to address them	1. Food Composition in accordance with Nutritional Needs 2. Nutritional Problems 3. Problem-Solving	Meeting via zoom meeting *Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to lectures from lecturers, asking questions, doing assignments, and discussing.		resources related to the courses taught to be consulted with the lecturer.	
10	● Sub-CLO: Sort the process of food processing by the body. (C3)	1. Food processing done by the body. 2. Digestive tools 1. Mouth 2. Esophagus	*Synchronous*: Meeting via zoom meeting *Asynchronous*:		Students make a creative model of the body's	1,2,3,4,5

	● Indicators: 1. Can mention the process of food processing in the body mechanically and chemically 2. Can describe the stages of the food processing process 3. Can explain the digestive system 4. Can describe the digestive process chart completely 5. Can conceptualize diseases that attack the digestive system	3. Stomach 4. Small intestine 5. Large Intestine	Self study via spot.upi.edu Discussion forums (group discussion) Listening to lectures from lecturers, asking questions, doing assignments, and discussing. Students discuss and present the results of the summary and model demonstration with the group.		food processing system.	
11	● Sub-CLO: Sort the process of food processing by the body (C3) ● Indicators:	Food Processing done by the Body : 1. Digestive process 2. Absorption	*Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion)		Seek some learning resources related to the courses taught to be	2,3,5,7,8,9

	1. Can describe the sequence of digestive processes completely 2. Can explain the factors that affect the process of nutrient absorption.		Listening to lectures from lecturers, asking questions, doing assignments, and discussing.		consulted with the lecturer.	
12	● Sub-CLO: Analyze the process of carbohydrate and protein metabolism ● Indicators: 1. Can understand the concept of metabolism 2. Can explain the process of carbohydrate metabolism. 3. Can re-explain the metabolic processes between proteins.	Metabolism a. Carbohydrate Metabolism b. Protein Metabolism	*Synchronous*: Meeting via zoom meeting *Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to lectures from lecturers, asking questions, doing assignments, and discussing.		Seek some learning resources related to the courses taught to be consulted with the lecturer.	2,3,4,7,9,11,13
13	● Sub-CLO:	Metabolism a. Fat Metabolism	*Synchronous*:		Seek some learning	

	Analyze the process of fat metabolism and the interaction of nutrient metabolism (C4) ● Indicators: 1. Can explain the process of fat metabolism 2. Can explain the metabolic interactions between nutrients.	b. Nutritional substance metabolism interaction	Meeting via zoom meeting *Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to lectures from lecturers, asking questions, doing assignments, and discussing.		resources related to the courses taught to be consulted with the lecturer.	
14	● Sub-CLO: Analyze excretion system (C3) ● Indicators: 1. Can mention the tools working as an excretory system 2. Can explain the function of the excretory organs 3. Can explain the work process on	Excretion: a. Excretion through lungs b. Excretion through skin	*Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to lectures from lecturers, asking questions, doing		Seek some learning resources related to the courses taught to be consulted with the lecturer.	

	each excretory system tool 4. Can describe the digestive process chart completely 5. Can re-explain the processes of humans' excretion		assignments, and discussing.			
15	● Sub-CLO: Analyze excretion system (C3) ● Indicators: 1. Students can explain the detailed process of the excretory system in the kidneys and intestines. 2. Students can demonstrate the process of excretion by the kidneys and intestines 3. Students can mention the factors affecting excretory system	Excretion a. Excretion through kidney b. Excretion through intestine	*Synchronous*: Meeting via zoom meeting *Asynchronous*: Self study via spot.upi.edu Discussion forums (group discussion) Listening to lectures from lecturers, asking questions, doing assignments, and discussing.		Seek some learning resources related to the courses taught to be consulted with the lecturer.	

	of the kidneys and intestines.					
16	**Semester Final Exam**					

6. References

1. Hardinsyah & I Dewa Nyoman Supariasa. 2016. Buku Kedokteran. Jakarta: Penerbit EGC.
2. Lilis Bonowati. 2014. Ilmu Gizi Dasar. Deepublish Publisher.
3. Almatsier S. 2016. Prinsip Dasar Ilmu Gizi. Jakarta: PT Gramedia Pustaka Utama.
4. Almatsier S, Soetardjo, Soekari. 2011. Gizi Seimbang Dalam Daur Kehidupan. Jakarta: PT Gramedia Pustaka Utama.
5. Toto Sudargo., dkk. 2021. Asuhan Gizi Pada Lanjut Usia. Yogyakarta: Gadjah Mada University Press, Anggota IKAPI dan APPTI.
6. Beck, Mary E. 2011. Ilmu Gizi dan Diet, Hubungannya dengan Penyakit-penyakit untuk perawat dan dokter. Yogyakarta: Penerbit Kerjasama Andi Ofset dengan Yayasan Essentia Medica (YEM).
7. Ana Samiatul Milah. 2019. Nutrisi Ibu dan Anak: Gizi Untuk Keluarga. Tasikmalaya: Edu Publisher.
8. Putra, Sitiatava R. 2013. Pengantar Ilmu Gizi dan Diet. Jogyakarta. Penerbit : D-Medika.
9. Sulfianti. 2021. Penentuan Status Gizi. Yayasan Kita Menulis.
10. Webster, Madden, Holdsworth. 2012. Gizi & Ditetika. Edisi ke 2. Penerbit Buku Kedokteran.
11. Cornelia, dkk. 2013. Konseling Gizi. Cet-1. Jakarta: Penerbit Penebar Plus..
12. Indra Ruswadi. Ilmu Gizi dan Diet Untuk Mahasiswa. Indramayu: Penerbit Adab. 2021.
13. Frances Sizer, Whitney E. 2018. *Nutrition: Concepts and Controverseries*. Boston: Cengage Learning.
14. Ahmad Suhaimi. 2019. Pangan, Gizi dan Kesehatan. Yogyakarta: Deepublish Publisher.
15. Tika Umilatifah. 2012. Menu Sehat Manula: Disertai Kandungan Gizi. Lembar Langit Indonesia.

7. Teaching Modules (Appendix 1)

8. Evaluation Instrument (Appendix 2)