



University of Kerala

Discipline	ZOOLOGY				
Course Code	UK3VACZOO201				
Course Title	Nutrition, Health and Wellness				
Type of Course	VAC				
Semester	III				
Academic Level	200-299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours/Week
	3	2 hours	-	2 hours	4
Pre-requisites	Pass in class XII				
Course Summary	This course provides a comprehensive understanding of nutrition and wellness, nutritional requirements for healthy life, importance of dietary fibre and water in diet and malnutrition. Students recollect food adulterants and common food preservatives used in food products and thereby emphasis the value of healthy food for a healthy society. Students will gain knowledge about health benefits through regular exercise, stress management and relaxation techniques that enable them to lead a healthy life.				

Detailed Syllabus

Module	Unit	Content	30 hrs
I	Introduction to Nutrition/ Principles of Nutrition		9
	1.1	Definition and classification of nutrition-macronutrients (carbohydrate, protein, lipid and fat) and micronutrients (minerals and vitamins).	4
	1.2	Importance of dietary fibre, Prebiotics, probiotics and water in diet.	2
	1.3	Vitamin and mineral Deficiency diseases -Malnutrition types – Obesity and its types, PEM-Kwashiorkor, Marasmus	3
II	Nutritional requirements		4
	2.1	Nutritional requirements during pregnancy, infants, toddler, children adolescence, adult and old age.	3
	2.2	Balanced diet and its importance in health management.	1
III	Health and wellness		10
	3.1	Concept of health and wellness, BMI	2
	3.2	Health benefits of regular physical activity- Types of exercise – aerobic and anaerobic (Brief account).	2
	3.3	Mental and Emotional health- Stress management and resilience	2
	3.4	Relaxation techniques-Deep breathing, Progressive Muscle Relaxation (PMR), Yoga and meditation (Brief account only).	4
IV	Lifestyle diseases		4
	4.1	Major Lifestyle Diseases- Causes, Prevention- Cardiovascular diseases (CVD), Obesity, Diabetes, Cancer.	3
	4.2	Hypokinetic diseases -Brief description only	1

V	Food adulterants and preservatives		3
	5.1	Food adulteration- Examples (Milk, Turmeric, Chilli, Honey)	1
	5.2	Common food preservatives – Mention any four examples (Sodium benzoate, Citric acid, Salt, Sugar).	1
	5.3	Junk food and its health implications., Common Hygienic practices for good health.	1

1. Ghosh S. (1981). The feeding care of infants and young children, UNICEF, New Delhi.
2. Gibney M.J (2013) Public Health Nutrition, Blackwell publishing, The Nutrition Society Textbook Series.
3. Gopalan C. Ramasastri B.S. & Balasubramanian S. C. (1971) Nutritive value of Indian foods. National Institute of Nutrition, Hyderabad.
4. Guyton, A.C and Hall, J.E. Text Book of Medical Physiology.
5. Manay, M.s. and Shadaksharaswamy, M. (1998). Food – Facts and Principles, New age international (P) Ltd.
6. Mudambi, S. R (1995). Fundamentals of Food and Nutrition. New age international, New Delhi.
7. Swaminathan, M. (1989). Hand book of food and nutrition. Bappco, Bangalore.
8. The complete manual of Fitness and Well-being (1988) The Reader's digest Association, Inc. Pleasantville, New York /Montreal.
9. Wong, K.V (2017) Nutrition, Health and Disease.

Web resources

1. <https://www.frost-flow.org>
2. <https://www.wholisticmatters.com>
3. <https://www.nin.res.in>
4. <https://www.res.in>
5. <https://www.nia.nih.gov>

Practicum (30 hrs)

Sl. No	Topic
1	Measure the BMI of different categories
2	Analysis and interpretation of nutritional information on food labels
3	Methylene Blue Reductase (MBR) test for milk quality checking
4	Testing adulteration of common food items (Any five)
5	Identification and comment on any four nutritional disorders
6	Construct a Vitamin Chart showing its sources and deficiency
7	Performing of Yoga and relaxation exercise and it's recording

Course Outcomes

No.	Upon completion of the course the graduate will be able to	Cognitive Level	PSO addressed
CO1	Identify and explain the classification and functions of macro- and micronutrients, assess the role of dietary components like fibre, prebiotics, probiotics, and water, recognize deficiency diseases and types of malnutrition including obesity and PEM, and apply the knowledge to evaluate and design balanced dietary plans for health and wellness.	U, R, Ap, An, E, C	PSO-1,3

CO2	Understand nutritional needs at different life stages and the importance of a balanced diet for good health.	U, R, Ap, An, E, C	PSO-1,3
CO3	Explain about health, wellness, exercise types, healthy diet tips, and stress management techniques.	U, R, Ap, An, E, C	PSO-1,2
CO4	Understand hypokinetic diseases and identify the common lifestyle diseases and their causes.	U, R, Ap, An, E, C	PSO-1,2
CO5	Identify common food adulterants and preservatives, understand the health risks of junk food, and apply basic hygienic practices to promote personal and community health.	U, R, Ap, An, E, C	PSO-5,6,7

R-Remember, U-Understand, Ap-Apply, An-Analyze, E-Evaluate, C-Create

Name of the Course: Nutrition, Health and Wellness

Credits: 2:0:1 (Lecture: Tutorial: Practical)

CO No.	CO	PO/PSO	Cognitive Level	Knowledge Category	Lecture (L)/Tutorial (T)	Practical (P)
1	Understand nutrition, wellness and nutritional requirements for healthy life importance of dietary fibre and water in diet.	PO - 1 PSO-1,3	U, R	F,	L	P
2	Remember the nutritional disorders and their symptoms.	PO - 1 PSO-1,3	R, U	F	L	P
3	Create an insight into the basic knowledge of food preservation and adulteration.	PO -1,2,3 PSO-1,2	U, An	F, P	L	P
4	Understand importance of diet to prevent obesity, hypertension, cardiovascular diseases, diabetes and cancer. Analyse fast-food culture and its health implications.	PO -1,2,3 PSO-1,2	U, An, E	F, C	L	P

5	Analyse the importance of exercise and yoga in daily life and its value in daily routine to lead a healthy life.	PO-2,6,8 PSO-5,6,7	An, Ap	P	L	P
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F-Factual, C- Conceptual, P-Procedural, M-Metacognitive

Mapping of COs with PSOs and POs:

	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	P O1	PO 2	PO 3	PO 4	P O5	PO 6	PO 7	PO 8
CO 1	1	-	2	-	-	-	-	1	-	-	-	-	-	-	-
CO 2	1	-	2	-	-	-	-	1	-	-	-	-	-	-	-
CO 3	1	2	-	-	-	-	-	1	2	3	-	-	-	-	-
CO 4	1	2	-	-	-	-	-	1	2	3	-	-	-	-	-
CO 5	-	1	-	-	1	2	3	-	1	-	-	-	2	-	3

Correlation Levels:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

Assessment Rubrics:

Assignment /Seminar topics

1. Fast-food culture in Kerala
2. Common adulterants
3. Lifestyle diseases
4. Importance of physical activities
5. Listing healthy foods
6. Computer aided diet analysis and nutrition counselling for different age groups

Continuous Comprehensive Assessment

1. Quiz
2. Assignment
3. Monitoring of yoga and exercise
4. Group discussion
5. Internal exam

End Semester assessment

1. Multiple choice questions
2. Very short answer questions
3. Short answer questions
4. Practical examination

Mapping of COs to Assessment:

	Internal Exam	Assignment/Quiz	Project Evaluation	End Semester Examinations
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓		✓