	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Nutrition Through Lifecycle**					
Type of Course	**DSC A**					
Course Code	**MG5DSCHSC300**					
Course Level	**300 - 399**					
Course Summary	Course investigates how nutrition requirements and challenges change throughout the human lifecycle and how alteration in nutritional requirements impact on human health.					
Semester	V	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-		60
Pre-requisites, if any	Nil					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the completion of the course the student could be able to :			
1	Summaries the basic concepts of RDA and EAR	U	1
2	Differentiate the nutritional needs and recommendations during adulthood and old age.	An	1
3	Evaluate the adequacy of diets and nutritional requirements during pregnancy and lactation	E	2
4	Analyse the nutritional adequacy and growth of infants.	An	1
5	Categorize the dietary modifications and nutritional requirements during Childhood and Adolescence.	An	2
6	Design food plans and assess the adequacy of diets to meet the nutritional needs of humans at various stages of life cycle.	C	2
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
Concepts of RDA & EAR, Nutrition for Adults and Elderly				
1	1.1	Basic concept and purposes of Recommending the Dietary Allowances and Estimated Average requirements (EAR).	10	CO 1
	1.2	Factors Affecting Recommended Dietary Allowances. Dietary guidelines for Indians. Uses of ICMR- RDA in planning balanced diet.		CO 1
	1.3	Reference Man and Reference Woman, Food and Nutritional Requirements for Adults, Dietary modifications for adults.		CO 2
	1.4	Physiological changes during old age. Nutritional Requirements of Elderly		CO 2
	1.5	Nutrition related Problems of Old Age, Dietary modifications for elderly.		CO 2
Nutrition in Pregnancy and Lactation				
2	2.1	Physiology of pregnancy, Nutritional requirements during pregnancy.	15	CO 3
	2.2	Dietary considerations, Nutritional Problems and Complications.		CO 3
	2.3	Physiology and hormonal control of Lactation. Nutritional Requirements during lactation		CO 3
Nutrition in Infancy, childhood and Adolescence				
3	3.1	Developmental milestones in Infancy.	15	CO 4
	3.2	Composition of Human Milk and Human Milk Substitutes Advantages of breast feeding, Bottle Feeding and related Problems.		CO 4
	3.3	Weaning and Supplementary Feeding		CO 4
	3.4	Use of growth charts and standards		CO 4

	3.5	Growth and Development of Pre School, School Going Children and Adolescence		CO 5
	3.6	Food and Nutritional Requirements.		CO 5
	3.7	Factors to be considered while Planning Diet for Children and Adolescents,		CO 5
	3.8	Nutritional problems and Eating Disorders.		CO 5
Related Experience				
4	4.1	Nutrient Requirements Analysis: Students will analyze dietary guidelines and nutrient requirements for different life stages (infancy, childhood, adolescence, adulthood, and elderly). They will compare and contrast nutrient needs at various life stages and identify specific nutrients of concern during each stage.	**20**	CO6
	4.2	Field Trip to Community Programs or Healthcare Facilities: Students will visit community programs or healthcare facilities that focus on nutrition interventions for specific age groups.		CO 3
5	**Teacher specific content** (This content will be evaluated internally)			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B. End Semester Examination			
	Written Examination			**70**

End Semester Evaluation

Theory: 70 Marks **Time : 2 hours**

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

REFERENCES

1. Mahtab, S, Bamji, Kamala Krishnasamy, Brahmam, G.N.V. (2012)Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi.
2. Srilakshmi, B. (2013), Dietetics, New Age International (P) Ltd., New Delhi.
3. SunetraRoday (2017). Food Science and Nutrition, Oxford University Press, New Delhi.
4. Swaminathan, M. (2012), Advanced Textbook on Food and Nutrition, Vol. 1, Second Edition, Bangalore Printing and Publishing Co. Ltd., Bangalore.

Suggested Readings

1. Abraham. S (2016), Nutrition through Life Cycle, First Edition, New Age International (P) Ltd. Publishers, New Delhi.
2. Chadha R and Mathur P (2015), Nutrition : A Lifecycle Approach. Orient Blackswan, New Delhi.
3. Seth V and Singh K (2006), Diet Planning through the Life Cycle: Part 1 Normal Nutrition, A Practical Manual, Elite Publishing House Pvt. Ltd. New Delhi.
4. Longvah, T, Ananthan, R, Bhaskarachary, K, Venkaiah, K. (2017). Indian Food Composition Tables (IFCT), Indian Council of Medical Research, National Institute of Nutrition, Hyderabad.
5. Shakuntala Manay, Shadaksharaswamy. M (2013) Foods, Facts and Principles, New Age International Pvt Ltd Publishers, 2nd Edition) Ltd., New Delhi.