THE MAHATMA GANDHI UNIVERSITY

UNDERGRADUATE PROGRAMMES (HONOURS)

SYLLABUS

MGU-UGP (Honours)

(2024 Admission Onwards)

Faculty: Tourism and Hospitality Studies

Expert Committee: Tourism

Subject: Food Nutrition

Mahatma Gandhi University
Priyadarshini Hills
Kottayam – 686560, Kerala, India

Syllabus Index

Name of the Minor: **Food Nutrition**

Semester 1

Course Code	Title of the Course	Type of the Course DSC, MDC, SEC etc.	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG1DSCFNN100	Basic Nutrition for Hotel Operations	DSC B	4	5	3		2	

Semester: 2

Course Code	Title of the Course	Type of the Course DSC, MDC, SEC etc.	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG2DSCFNN100	Hotel Hygiene and Food Safety	DSC B	4	5	3		2	

Semester: 3

Course Code	Title of the Course	Type of the Course DSC, MDC, SEC etc.	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG3DSCFNN200	Advanced Nutrition for Hotel Operation	DSC B	4	5	3		2	

Semester: 4

Course Code	Title of the Course	Type of the Course DSC, MDC, SEC etc.	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG4DSCFNN200	Advanced Nutrition for Hotel Operation	DSC C	4	5	3		2	

	Mahatma Gandhi University **Kottayam**					
Programme						
Course Name	**Basic Nutrition for Hotel Operations**					
Type of Course	**DSC B**					
Course Code	MG1DSCFNN100					
Course Level	**100-199**					
Course Summary	The course aims at providing a comprehensive introduction to the fundamental principles of Nutrition, with emphasis on the role of nutrients in maintaining optimal health. Students will explore the basics of Macronutrients and Micronutrients, their functions, sources and recommended daily intake.					
Semester	I	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3		1		75
Pre-requisites	Students should have proficiency in English language as the course involves reading and understanding scientific materials, He/she should have genuine interest in learning about nutrition and its impact on health, a willingness to explore and question nutritional concepts while fostering a curiosity driven approach to learning					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Understand the concept of food and nutrition in Human body	U	1, 2,10
2	Identify various Nutrients present in food, dietary sources and their functions in maintaining good health	An	1, 2, 10
3	Acquire knowledge about their functions, RDA, food sources of nutrients	U	1, 2, 10
4	Should be able to formulate different food groups for the society	C	1, 2, 6, 10
5	Estimate the energy requirements in the diet	C	1, 2, 10

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Module	Course Description	Hrs	Co No.
1	**Basic Aspects of Nutrition**	**15**	
1.1	Definition - Health, Nutrition and Nutrients	4	1
1.2	Function of Food (Physiological, Psychological and Social) in maintaining Good Health	5	1,3
1.3	Concept of food groups, factors affecting meal planning and importance of meal planning	6	1,4
2	**Macronutrients & Micro-Nutrients**	**15**	
2.1	Carbohydrates - Classification, function, sources and RDA Proteins - Classification, function, sources and RDA Lipids - Classification, function, sources and RDA	5	1,2
2.2	Vitamins- Classification, function, sources, Minerals - Classification (MacroMinerals and Trace Minerals), functions, sources	5	1,2
2.3	Water – Definition, Functions of Water, Role of Water in Maintaining Health (Water Balance)	5	1,2
3	**Nutritional Energy dynamics**	**15**	
3.1	Definition of Energy and Units of its Measurement (kcal)	3	1
3.2	Factors affecting Energy Requirements,	3	1,5
3.3	Concept of BMR and SDA	5	1
3.4	Dietary sources of energy	4	5
4	**Nutrition Practical**	**30**	
4.1	Preparation of food from different food groups and their significance in relation to health	10	3,4
4.2	Planning and preparation of normal diets and Fluid diet	10	3,4
4.3	General concepts of weights and measures. Eye estimation of raw and cooked foods	10	1, 5
5	**Teachers Specific Assessment**		

Teaching and Learning Approach	**Classroom Procedure (Mode of transaction)** • Role play, • Critical thinking, • Teamwork, and • Leadership skills.

Assessment Types

A. Continuous Comprehensive Assessment (CCA) - Theory

CRITERIA	MARKS DISTRIBUTION
Internal Test	
Assignment	
Total	25

Practical CCA- 15 Marks

PRACTICAL ASSESSMENT CCA	MARKS DISTRIBUTION
Practical Task	
Practical Record Preparation	
Viva Voce	
Grooming	
Total	15

B. End Semester Evaluation (ESE) - Theory

Written Test- 50 Marks – 1.5 Hours Examination

Descriptive Type	Word Limit	No of question to be answered	Marks
Short Answer	50 Words	10 out of 15	10*2= 20
Short Essays	200 Words	4 out of 6	4*5 = 20
Essays	350 Words	1 out of 3	1*10 = 10
TOTAL			50

Practical ESE- 35 Marks – 1.5 Hour Examination

PRACTICAL ASSESSMENT ESE	MARKS DISTRIBUTION
Practical Task	14
Practical Record Preparation	8
Viva Voce	8
Grooming	5
Total	35

References

- Food Facts & Principles by Shakuntala Manay & Shadakhraswamy
- Food Science by Srilakshmi, second edition,2002.
- Sunetra Roday.,2014 Food Science and Nutrition, 2nd Edition, Oxford University press
- HandBook of Food and Nutrition., Dr.M. Swaminathan

	Mahatma Gandhi University **Kottayam**					
Programme						
Course Name	**Hotel Hygiene and Food Safety**					
Type of Course	**DSC B**					
Course Code	MG2DSCFNN100					
Course Level	**100-199**					
Course Summary	This course provides a comprehensive introduction to the fundamental principles of Food safety, emphasising the role of microorganisms to maintain optimal health.					
Semester	II	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3		1		75
Pre-requisites	Students should have proficiency in English language as the course involves reading and understanding scientific materials. He/she should have a genuine interest in learning Food safety and its impacts on health, a willingness to explore and question hygienic concept, fostering a curiosity driven approach to learning					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1.	To impart students with a basic understanding of food safety	U	1,2,10
2.	To develop an understanding on the role of microorganisms in maintenance of health.	U	1,2,10
3.	To inspect the presence of common food adulterants and their detection	An	1,2,6 ,10
4	To create a general awareness on food borne illnesses and their preventive measures	C	1,6,10

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Module	Course Description	Hrs	CO No.
1	**Introduction to food safety**	**15**	
1.1	Basic Introduction to Food Safety, Food Hygiene and Sanitation	4	1
1.2	Contaminants – Physical, Chemical and Biological	5	1
1.3	Food Hazards and their risks	6	1
2	**Microorganisms in Food**	**15**	
2.1	General characteristics of Microorganisms based on their occurrence and structure.	5	1,2,4
2.2	Factors affecting growth of microorganisms in food (intrinsic and extrinsic)	5	1,2
2.3	Common food borne microorganisms: Bacteria (spores/capsules) Fungi, Viruses, Parasites	5	1,2
3	**Food-borne Diseases & Food Adulteration**	**15**	
3.1	Types (infections and intoxication)	3	1,2,4
3.2	Common diseases caused by food borne pathogens	3	1,2,4
3.3	Preventive measures	2	1,2,4
3.4	**Food Adulteration** Introduction to Food Adulteration and its Types	3	1,3
3.5	Common Adulterants in Food.	2	1,3
3.6	Method of Detection (Basic Principles)	2	1,3
4	**Nutrition Practical**	**30**	
4.1	Composition and adulterant detection in the following foods- Milk, Sugar, Spices, Honey, Ghee (one method of detection for each food item)	30	3
5	**Teachers Specific Content**		

Teaching and Learning Approach	**Classroom Procedure (Mode of transaction)** • Role play, • Critical thinking, • Teamwork, and • Leadership skills.

Assessment Types

A.Continuous Comprehensive Assessment (CCA) - Theory

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Internal Test	
Assignment	
Total	25

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Practical Record Preparation	
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PRACTICAL ASSESSMENT ESE	MARKS DISTRIBUTION

	Practical Task	**14**
	Practical Record Preparation	**8**
	Viva Voce	**8**
	Grooming	**5**
	Total	**35**

References

- Frazier, W.C. (1968): Food Microbiology. 4 th Edition. McGraw Hill Inc.
- Jay, J.M., Lossner M.J. and Golden D.A. (2008): Modern Food Microbiology. 7 th edition. Springer. ISBN: 0387231803
- Longree, K. (1967): Quality Food Sanitation. McGraw Hill Publishers:New York.
- Srilakshmi B. (2007): Food Science. NewAge International
- Subbulakshmi G. (2001): Food Science and Preservation. NewAge International (P) Ltd

	Mahatma Gandhi University Kottayam					
Programme						
Course Name	**Advanced Nutrition for Hotel Operations**					
Type of Course	**DSC B**					
Course Code	MG3DSCFNN200					
Course Level	**200-299**					
Course Summary	This course offers a comprehensive understanding of nutritional science which includes designing intricate nutritional plans for various populations and managing nutritional programs.					
Semester	III	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3		1		75
Pre-requisites	Students should have proficiency in English language as the course involves reading and understanding scientific materials. He/she should have a genuine interest in learning nutrition and its impacts on health, willingness to explore and question nutritional concepts, and foster a curiosity driven approach to learning					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains	PO No
1	To apply knowledge of nutrition to human health across the lifespan.	A	1, 2,10
2	Relate foods and nutrients to the biological requirements of humans at different stages of life cycle.	U	1,2,6,10
3	Explain, compare and contrast the nutritional requirements of humans during different stages of the life cycle.	E	1,2,6,10
4	Apply collaboration and teamwork skills through shared learning in nutritional disease topics.	U	1,,2,6,5,4,10
5	To formulate a dietary intervention plan to address nutritional deficiencies or excesses according to the health needs of individuals relative to age, developmental and disease status.	C	1,2, 10,6
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Course Description	Hrs	CO No.
1	**Balanced Diet and Malnutrition**	**15**	
1.1	Definition - Balanced diet Importance of a balanced diet	4	1
1.2	Malnutrition (undernutrition and overnutrition)	5	1,2
1.3	Disorder and its clinical symptoms- Diabetes Mellitus, Obesity, Marasmus, Kwashiorkor, Marasmic kwashiorkor, Cholesterol, Blood pressure	6	1
2	**Menu Planning and Therapeutic Nutrition**	**15**	
2.1	Planning of nutritionally balanced meals based upon the three-group system, Factors affecting meal planning, calculation of nutritive value of dishes or meals	5	1
2.2	Factors affecting meal planning, calculation of nutritive value of dishes or meals, Critical evaluation of meals served at institutes or hotels based on the principle of meal planning	5	1,2
2.3	Nutrition in pregnancy – Food and nutrient requirements, physiological changes during pregnancy, Nutrition during infancy	5	1,2
3	**Developmental Nutrition**	**15**	
3.1	Nutrition for school going children – Food and nutrient requirement, growth pattern, packed lunches, school lunch programmes.	5	1,2,3,5
3.2	Nutrition during adolescence – Food and nutrient requirements, changes in growth pattern, and puberty	5	1,2,3,5
3.3	Nutrition in adulthood – Food and nutrient requirements, physical, mental and social changes influencing meal pattern	5	1,2,3,5
4	**Nutrition Practical-2**	30	
4.1	Planning, preparation and calculation of following diets: 1. High and low caloric diet 2. Diet for Diabetes Mellitus 3. Diet for Hypertension	30	1,2,3,4,5
5	**Teachers Specific Assessment**		

Teaching and Learning Approach	**Classroom Procedure (Mode of transaction)** • Role play, • Critical thinking, • Teamwork, and • Leadership skills.

Assessment Types

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	Practical Task	**14**
	Practical Record Preparation	**8**
	Viva Voce	**8**
	Grooming	**5**
	Total	**35**

References

1. Wardlaw G.M, Hampi J.S, DiSilvestro R.A.: Perspectives in Nutrition, 6th edition, McGraw Hill, 2004.

2. Chadha R. and Mathur P.: Nutrition: A Lifecycle Approach. Orient Blackswan New Delhi, 2015.

3. Seth V. and Singh K.: Diet Planning through the Life Cycle: Part 1 Normal Nutrition: A Practical Manual, Elite Publishing House Pvt. Ltd. New Delhi,2006.

4. Robinson, Normal and Therapeutic Nutrition.: Macmillan Pub. Company New York , 2006.

5. Sumati R. Mudambi, M.V. Rajagopal.: Fundamentals of Food, Nutrition and Diet Therapy, New Age international publishers, New Delhi, 2015.

6. Srilakshmi B.: Dietetics, New Age international publishers, New Delhi, 2014.

	Mahatma Gandhi University Kottayam					
Programme						
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Type of Course	**DSC C**					
Course Code	MG4DSCFNN200					
Course Level	**200-299**					
Course Summary	This course offers a comprehensive understanding of nutritional science which includes designing intricate nutritional plans for various populations and managing nutritional programs.					
Semester	IV	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3		1		75
Pre-requisites	Students should have proficiency in English language as the course involves reading and understanding scientific materials. He/she should have a genuine interest in learning nutrition and its impacts on health, willingness to explore and question nutritional concepts, and foster a curiosity driven approach to learning					

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4	Apply collaboration and teamwork skills through shared learning in nutritional disease topics.	U	1,,2,6,5,4,10
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