

B.Sc. CLINICAL NUTRITION & DIETETICS

**PROPOSED SCHEME FOR CHOICE BASED CREDIT SYSTEM IN
B.Sc. CLINICAL NUTRITION & DIETETICS
EFFECTIVE FROM 2019-20**

FIRST YEAR – SEMESTER I				
Code	Course Title	Course Type	HPW	Credits
BS 101		AECC 1	2	2
BS 102		CC-1A	4	4
BS 103		CC-2A	4	4
BS 104	Introductory Nutrition	DSC - 1A	4T+2P=6	4+1=5
BS 105		DSC - 2A	4T+2P=6	4+1=5
BS 106		DSC - 3A	4T+2P=6	4+1=5
	TOTAL			25
SEMESTER II				
BS 201		AECC 2	2	2
BS 202		CC-1B	4	4
BS 203		CC-2B	4	4
BS 204	Basic Nutrition	DSC -1B	4T+2P=6	4+1=5
BS 205		DSC -2B	4T+2P=6	4+1=5
BS 206		DSC -3B	4T+2P=6	4+1=5
	TOTAL			25
SECOND YEAR- SEMESTER III				
BS 301	Patient Counseling Skills	SEC -1	2	2
BS 302	Food Preservation	SEC -2	2	2
BS 303		CC-1C	3	3
BS 304		CC-2C	3	3
BS 305	Basic Dietetics	DSC- 1C	4T+2P=6	4+1=5
BS 306		DSC- 2C	4T+2P=6	4+1=5
BS 307		DSC- 3C	4T+2P=6	4+1=5
	TOTAL			25
SEMESTER IV				
BS 401	Nutrition and Fitness	SEC – 3	2	2
BS 402	Food Safety and Quality Control	SEC – 4	2	2
BS 403		CC-1D	3	3
BS 404		CC-2D	3	3
BS 405	Food Science	DSC- 1D	4T+2P=6	4+1=5
BS 406		DSC- 2D	4T+2P=6	4+1=5
BS 407		DSC- 3D	4T+2P=6	4+1=5
	TOTAL			25
THIRD YEAR- SEMESTER V				
BS 501	Nutrition and Health	GE	4T	4
BS 502		CC-1E	3	3
BS 503		CC-2E	3	3
BS 504	A- Community Nutrition	DSE-1E	4T+2P=6	4+1=5
	B- Maternal and Child Nutrition			

BS 505		DSE-2E	4T+2P=6	4+1=5
BS 506		DSE-3E	4T+2P=6	4+1=5
	TOTAL			25
SEMESTER VI				
BS 601		CC-1F	3	3
BS 602		CC-2F	3	3
BS 603	A- Clinical Dietetics	DSE-1F	4T+2P=6	4+1=5
	B- Diet in Disease			
BS 604		DSE-2F	4T+2P=6	4+1=5
BS 605		DSE-3F	4T+2P=6	4+1=5
BS 606	Project Work/Optional		4	4
	TOTAL			25
	TOTAL CREDITS			150
Credits under Non-CGPA	NSS /NCC /sports / Extra curricular	6	Up to 6 (2 in each year)	
	Summer Internship	4	Up to 4 (2 in each, after I & II years)	

CC- Core Course

AECC- Ability Enhancement Compulsory Course

DSC- Discipline Specific Core

SEC- Skill Enhancement Course

DSE- Discipline Specific Elective

GE- Generic Elective

HPW – Hours per week

SUMMARY OF CREDITS FOR B. Sc. PROGRAM

S. No.	Course Category	No. of courses	Credits per course	Credits
1	AECC	2	2	4
2	SEC	4	2	8
3	CC	12	4 (year1) 3 (year 2) 3 (year 3)	40
4	DSC	12	5	60
5	DSE	6	5	30
6	GE	1	4	4
7	Project work			4
	TOTAL	40		150

B.Sc. CLINICAL NUTRITION & DIETETICS
OSMANIA UNIVERSITY

REVISED SYLLABUS (CBCS) WITH EFFECT FROM 2019-20

B. Sc. I YEAR
SEMESTER I (Theory) PAPER I DSC - 1A

Code BS 104 INTRODUCTORY NUTRITION

4 Hours/Week; Credits 4

Credit-1: Introduction to Nutrition

- 1.1 Introduction to nutrition, food as a source of nutrients, functions of food.
Definition of nutrition, nutrients, adequate, optimum and good nutrition, malnutrition.
Inter relationship between nutrition and health.
- 1.2 Introduction to meal management, Balanced diet, Food guide for India, Basic 5 food groups. Basic principles and steps in meal planning

Credit-2: Carbohydrates and Lipids

- 2.1 Composition, Classification, Sources and Functions, Digestion, Absorption and Transport
Carbohydrate metabolism- Glycolysis, citric acid cycle, glycogenesis and glycogenolysis, gluconeogenesis, pentose phosphate pathway.
- 2.2 Lipids- Composition, classification, sources and Functions, Essential fatty Acids, Digestion. Lipid metabolism-Beta-oxidation of fatty acids

Credit-3: Amino acids, Proteins and Enzymes

- 3.1 Amino acids: Classification- Chemical and Nutritional, Deamination and Transamination, Urea cycle.
Proteins- Composition, Classification, Sources, Functions, Effects of protein deficiency.
- 3.2 Enzymes - Definition, Classification, Properties, Mechanism of Enzyme Action, Factors Effecting Enzyme Action, Enzyme Inhibitors

Credit-4: Water and Hormones

- 4.1 Water as a nutrient, functions of water, sources, requirements, water balance, effect of deficiency.
- 4.2 Hormones: Pituitary, adrenocortical, thyroid and reproductive hormones; Hormones of the Pancreas and hormones of the adrenal cortex- Mode of action and control of secretion.

Suggested Readings

Rama Rao A.V.S.S. and Surya Lakshmi A., A text book of Biochemistry for medical students, UBS Publishers Distributors Ltd.

Weil J.H. General Biochemistry, Wiley Eastern Limited, New Delhi.

Agarwal, A. and Udipi S. A. Textbook of Human Nutrition, Jaypee Brothers Medical Publishers (P) Ltd. New Delhi.

Mudambi, S.R. and Rajagopal M.V. Fundamentals of Foods and Nutrition, Wiley Eastern Limited.

Suresh R. Essentials of Human Physiology, Books and Allied (P) Ltd. Kolkata.

I SEMESTER SYLLABUS – Practical paper

Code: BS 104 INTRODUCTORY NUTRITION (50 Marks)
3 Hours/week; Credits 1

Credit-5

1. Food Exchange List and using the Indian Food Composition Tables to calculate Nutritive values of Food preparations.
2. Nutritive Value Calculations of Cereal based Preparations
Vegetable pulao, Puri, Lemon Rice, Dosa, Idly, Stuffed Paratha, Upma, Poha, Vermicelli Upma, Phulka and Chapathi
3. Nutritive Value Calculations of Pulse based Preparations
Cholae, Plain Dal, Tomato dal and Spinach dal
4. Nutritive Value Calculations of Vegetable based Preparations
Carrot and peas fugath, Beans fugath, Cauliflower and Tomato curry, Cauliflower and Peas fugath and Potato and peas fugath.
5. Nutritive Value Calculations of Meat based Preparations
Minced meat curry, Mutton curry, Omelet, Chicken curry, Fish curry and Egg curry
6. Nutritive Value Calculations of Milk based Preparations
Fruit salad, Vermicelli kheer, Sago kheer and Caramel pudding.
7. Planning diets for an Adult man and an Adult woman during different physical activities- sedentary, moderate and heavy worker.

B Sc I YEAR, SEMESTER II (Theory)

Code BS 204 BASIC NUTRITION DSC -1B

4 Hours/Week, Credits 4

Credit-1: Energy

- 1.1 Energy: Units of energy, components of energy requirement, BMR, Measurement of energy, factors affecting BMR
- 1.2 Energy requirements of Adults, Reference man and Woman.

Credit-2: Vitamins and Minerals

- 2.1 Water soluble vitamins: Classification, sources, functions and deficiency of Ascorbic acid, Thiamine, Riboflavin, Niacin, Vitamin B₆, Vitamin B₁₂ and Folic acid.
Fat soluble vitamins: Classification, sources, functions and deficiency of Fat soluble vitamins A, D, E, K.
- 2.2 Minerals: Functions, sources and deficiency of Calcium, iron, iodine, sodium and potassium.

Credit-3: Nutrition in Pregnancy, Infancy and Lactation

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- 3.1 Nutrition in pregnancy: Physiological stages of pregnancy, nutritional requirements, complications of pregnancy.
- 3.2 Nutrition during infancy: Nutritional requirements, Nutritional contribution of Human milk vs. cow's milk/infant formula, Introduction of supplementary foods.
Nutritional requirements during Lactation.

Credit-4: Childhood, School age, Adolescence and Geriatric Nutrition

- 4.1 Nutrition during Early childhood: Nutritional requirements of a toddler/ preschool child.
Nutrition of School children: Nutritional requirements of school children, Importance of snacks, School lunch.
- 4.2 Nutrition during Adolescence: Nutritional requirements of adolescents, Factors influencing eating habits.
Geriatric Nutrition: Factors influencing food intake, Nutritional requirements.

Suggested Readings

Agarwal, A. and Udipi S. A. Textbook of Human Nutrition, Jaypee Brothers Medical Publishers (P) Ltd. New Delhi.

Helen A. Guthrie, Introductory Nutrition, Times Mirror-Mosby.

Swaminathan M. Advanced Text book on Food and Nutrition, Vol-I, The Bangalore Printing & Publishing Co., Ltd.

Wardlaw G.M. & Insel P.M. Perspectives in Nutrition Mosby Publishing Co., St. Louis.

Mudambi, S.R. and Rajagopal M.V. Fundamentals of Foods and Nutrition, Wiley Eastern Limited.

Patricia A. Kreutler and Dorice Czajka Narins, Nutrition in perspective, Prentice Hall, New

Jersey.

Swaminathan M. Hand book of Food and Nutrition, The Bangalore Printing Publishing Co. Ltd.

II SEMESTER SYLLABUS – Practical paper

BS 204 BASIC NUTRITION

3 Hours/week; Credits 1 (50 marks)

Credit-5

1. Planning a balanced diet for a pregnant woman doing different physical activities-
sedentary, moderate and heavy worker.
2. Planning a balanced diet for a Lactating woman doing different physical activities-
sedentary, moderate and heavy worker (0-6 months and 6-12 months).
3. Planning a balanced diet for a pre-school child.
4. Planning a balanced diet for a school age child (Packed lunch).
 - School going boy aged 10-12 years
 - School going girl aged 10- 12 years
5. Planning a balanced diet for Adolescent girls and adolescent boys (Packed lunch).
 - Adolescent girl aged 13-15 years
 - Adolescent boy aged 13-15 years
 - Adolescent girl aged 16-17 years
 - Adolescent boy aged 16-17 years
6. Planning a balanced diet for a Senior Citizen.
 - Planning a diet for an elderly woman
 - Planning a diet for an elderly man

FACULTY OF SCIENCE
B.Sc. I SEMESTER(CBCS) EXAMINATION
Subject: CLINICAL NUTRITION & DIETETICS
THEORY MODEL PAPER- CBCS Pattern

Time 3 Hrs.

Max Marks 80

PART A (8x4=32M)
(SHORT ANSWER TYPE)

NOTE: ANSWER ANY EIGHT OF THE FOLLOWING QUESTIONS

1. CREDIT I
2. CREDIT I
3. CREDIT I
4. CREDIT II
5. CREDIT II
6. CREDIT II
7. CREDIT III
8. CREDIT III
9. CREDIT III
10. CREDIT IV
11. CREDIT IV
12. CREDIT IV

PART -B(4x12=48M)
(ESSAY ANSWER TYPE)

NOTE: ATTEMPT ALL THE QUESTIONS

- 13 (a) CREDIT I
(or)
(b) CREDIT I
- 14 (a) CREDIT II
(or)
(b) CREDIT II
- 15 (a) CREDIT III
(or)
(b) CREDIT III
- 16 (a) CREDIT IV.
(or)
(b) CREDIT IV