

CBCS SYLLABUS
FOR
THREE YEARS UNDER-GRADUATE COURSE
NUTRITION (PROGRAMME)
(w.e.f. 2017)



BANKURA UNIVERSITY
BANKURA
WEST BENGAL
PIN 722155

**STRUCTURE IN NUTRITION (PROGRAMME)****SEMESTER – I**

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SP/NUT/101/C -1A	C-1A Basic Nutrition	6	10	40	50	5	1	-
SP/102/ C-2A	Discipline-2	6	10	40	50			
SP/103/ C-3A	Discipline-3	6	10	40	50			
ACSHP/ 104/ AECC-1	Environmental Studies	4	10	40	50	4	-	-
Total in Semester – I		22	40	160	200	9	1	-

SEMESTER –II

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SP/NUT /201/C-1B	C-1B Food Commodities Food Commodities (Practical)	6 (4+2)	10	40 (25+15)	50	4	-	4
SP/202/ C-2B	Discipline – 2	6	10	40	50			
SP/ 203/C- 3B	Discipline – 3	6	10	40	50			
AVSHP/204/ AECC-2	English/MIL	2	10	40	50	2	-	-
Total in Semester – II		20	40	160	200	6		4

**SEMESTER – III**

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SP/NUT / 301/C-1C	C-1C Human Nutrition Human Nutrition (Practical)	6 (4+2)	10	40 (25+15)	50	4	-	4
SP/302/C-2C	Discipline - 2	6	10	40	50			
SP/ 303/ C-3C	Discipline - 3	6	10	40	50			
SP/NUT /304/ SEC-1	SEC-1 Food Adulteration	2	10	40	50	-	-	4
Total in Semester - III		20	40	160	200	4		8

SEMESTER – IV

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SP/NUT /401/C-1D	C-1D Food Laws And Concepts Of Food Safety	6	10	40	50	5	1	-
SP/ 402/ C-2D	Discipline-2	6	10	40	50			
SP/ 403/ C-3D	Discipline-3	6	10	40	50			
SP/NUT /404/ SEC-2	SEC-2 Practical Approaches in Food and Nutrition (Practical)	2	10	40	50	-	-	4
Total in Semester - IV		20	40	160	200	5	1	4

**SEMESTER – V**

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SP/NUT /501/DSE-1A	DSE-1A Diet Therapy Diet Therapy (Practical)	6 (4+2)	10	40 (25+15)	50	4	-	4
SP/ 502/DSE-2A	Discipline - 2	6	10	40	50			
SP/ 503/DSE-3A	Discipline - 3	6	10	40	50			
SP/NUT /504/SEC-3	SEC-3 Assessment of Community Nutritional Status (Practical)	2	10	40	50	-	-	4
Total in Semester – V		20	40	160	200	4		8

SEMESTER – VI

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SP/NUT / 601/DSE-1B	DSE-1B Approaches In Community Nutrition	6	10	40	50	5	1	-
SP/ 602/DSE-2B	Discipline - 2	6	10	40	50			
SP/ 603/DSE-3B	Discipline - 3	6	10	40	50			
SP/NUT / 604/SEC-4	SEC -4 Nutritional Management of Malnutrition in Community (Practical)	2	10	40	50	-	-	4
Total in Semester – VI		20	40	160	200	5	1	4

SP= Science programme/Pass, NUT= Nutrition, ACSHP= Arts Commerce Science Honours Paass, C= Core Course, MIL= Modern Indian Language, AECC = Ability Enhancement Compulsory Course, SEC= Skill Enhancement Course, DSE= Discipline Specific Elective IA= Internal Assessment, ESE= End-Semester Examination, Lec.= Lecture, Tu.= Tutorial, and Pr.=Practical



SEMESTER – I

C-1A Basic Nutrition

1. Basic terms used in food and nutrition
2. Functions, dietary sources, clinical manifestations of deficiency/ excess of the following nutrients:
 - Carbohydrates, lipids and proteins
 - Fat soluble vitamins – A, D, E and K
 - Water soluble vitamins – thiamine, riboflavin, pyridoxine, folate, vitamin B12 and vitamin C
 - Minerals – calcium, iron and iodine
3. Food groups and Food pyramid. Concept of balanced diet. Reference man and woman
4. Concept of dietary reference intakes
5. Dietary guidelines for Indians



SEMESTER – II

C-1B Food Commodities

1. Nutritional contribution and changes during cooking of the following food groups:
 - Cereals
 - Pulses
 - Fruits and Vegetables
 - Milk and Milk products
 - Eggs
 - Meat, Poultry and Fish
 - Fats and Oils
2. Food Adjuncts
 - Spices and Herbs
 - Food Additives
3. Different methods of cooking: Dry heat, Moist heat, Shallow fat frying, Deep fat frying, Braising
4. Effects of cooking on nutritive value of foods

Food Commodities (Practical)

1. Weight measurement
2. Different Methods of Cooking – understanding the principles involved and nutritional quality and portion size
3. Preparation of dishes involving each food group



SEMESTER – III

C-1C Human Nutrition

1. RDA, nutritional guidelines, nutritional concerns and healthy food choices for:
 - Adult man and woman
 - Pregnant woman
 - Lactating mother
2. RDA, nutritional guidelines, nutritional concerns and healthy food choices for:
 - Infants
 - Preschool children
 - School children
 - Adolescents

Human Nutrition (Practical)

1. Introduction to meal planning
2. Planning and preparation of diets and dishes for pregnant and lactating woman, preschool child, school child and adolescents

SEC-1 Food Adulteration(Practical)

1. Food Adulteration: Types of food adulteration, common adulterants in food and their effects on health. Common methods to detect adulterants in foods
2. Detection of common adulterants in following foodstuffs :
 - Detection of vanaspati in ghee/butter
 - Detection of khesari flour in besan
 - Detection of Metanil yellow in turmeric/coloured sweet products
 - Detection of argemone oil in edible oil
 - Detection of artificial colour/ foreign matter in tea



SEMESTER – IV

C-1D Food Laws and Concepts Of Food Safety

1. Concept of food safety, factors affecting food safety
2. Basic concept of HACCP
3. Safe food handling practices
4. Food adulteration, Food additives
5. Food laws – PFA, Agmark, Codex alimentarius, BIS, FPO, MPO, FSSAI
6. Food contamination and related health hazards – botulism, aflatoxin and staphylococcal intoxication, Arsenic and lead poisoning

SEC-2 Practical Approaches in Food and Nutrition (Practical)

1. Recording of self diet by 24 hour recall method and its nutritional analysis
2. Planning of meals for adults of different activity levels for various income groups
3. Nutritional labelling of food products



SEMESTER – V

DSE-1A Diet Therapy

1. Therapeutic adaptations of normal diet
2. Clear fluid, full fluid, soft and regular diet
3. Aetiology, clinical features and nutritional management of
 - GI Tract Disorders – Peptic ulcer, diarrhoea, constipation, flatulence, celiac disease
 - Liver – Viral hepatitis
 - Obesity
 - Diabetes mellitus
 - Hypertension and coronary heart disease
 - Fever

Diet Therapy (Practical)

Planning, preparation and service of diets for the following:

- Therapeutic diets – Normal, soft, clear and full fluid
- Obesity
- Type 2 diabetes mellitus
- CHD
- Viral hepatitis

SEC-3 Assessment of Community Nutritional Status (Practical)

1. Growth chart: plotting and interpretation
2. Nutritional anthropometry: estimation of BMI and WHR
3. Clinical assessment of nutritional deficiencies
4. Anthropometric and clinical status assessment in a community



SEMESTER – VI

DSE-1B Approaches in Community Nutrition

1. Definition, Factors affecting community health
2. Nutritional status assessment: nutritional anthropometry – height, weight, BMI, MUAC, head and chest circumference, Diet survey by recall method, Clinical assessment
3. National programmes to combat malnutrition: ICDS, Mid day meal, Special nutrition programme
4. National and International agencies to combat malnutrition: NIN, ICMR, ICAR, CFTRI, WHO, FAO, UNICEF, CARE

SEC -4 Nutritional Management of Malnutrition in Community (Practical)

1. Nutritional management of the following in children:
 - Protein energy malnutrition
 - Nutritional anaemias
 - Vitamin A deficiency
 - Iodine deficiency disorders
2. Planning and preparation of low cost dishes for the following:
 - Protein energy malnutrition
 - Nutritional anaemias
 - Vitamin A deficiency