

LESSON PLAN (2023) JUL-DEC

1st Semester Hons.

FNT-A- CC-1-1- Th:	BASIC FOOD SCIENCE		4 CREDITS
Sl no	Chapters	Teacher's name	Hours
1.	Basic concept on Food, Nutrition and Nutrients. Classification of Food, Classification of Nutrients.	Dr Anindita Ray (Chakravarti)	2
2.	Carbohydrates - Definition, Classification. Structure and properties. Monosaccharides-glucose, fructose, galactose. Disaccharides - Maltose, lactose, sucrose Polysaccharides - Dextrin, starch, glycogen, resistant starch. Carbohydrates - Sources, daily requirements, functions. Effects of too high and too Low carbohydrates on health. Digestion and absorption of	Dr Sangita Manna	6

	carbohydrate.		
3.	Lipids -Definition, Classification & Properties. Fatty acids-composition, properties, types. Lipids sources, daily requirements, functions. Digestion & Absorption of nutrients. Role & nutritional significances of PUFA, MUFA, SFA, W-3 fatty acid.	Dr Suryatapa Das	6
4.	Proteins Definition, Classification, Structure & properties. Amino acids-EK Classification, types, functions. Proteins Sources, daily Effect of too high too low proteins on health. (Digestion requirements, functions, absorption. Assessment of Protein quality (BV, PER, NPU). Factors affecting protein bio-availability including anti-nutritional factors.	Sajida Khatoon	6
FNT-A- CC-1-1- P:	FOOD SCIENCE (PRACTICAL)		2 CREDITS
1.	Identification of Mono, Di and polysaccharides	Sejuti Ray	2+2+2
2.	Identification of Proteins	Dr Tanima Paul	2
3.	Identification of glycerol.	Dr Tanima Paul	2
FNT-A- CC-1-2- Th:	HUMAN PHYSIOLOGY-I		4 CREDITS
1.	Unit of Life: Structure and functions	Aritri Nandy	4

	of cell with special reference to Plasma membrane (Fluid Mosaic Model), Mitochondria, Ribosome, Endoplasmic reticulum. Nucleus (nuclear membrane, nuclear chromatin and nucleolus) Nucleotide, Homeostasis, Positive and negative feedback.		
2.	Circulatory and Cardiovascular system: Blood and its composition, formed elements, Blood groups, Mechanism of blood coagulation, Introduction to immune system, Erythropoiesis and anaemia, Structure and functions of heart, Cardiac cycle, cardiac output, blood pressure and its regulation.	Aritri Nandy	4
3.	Digestive System: Structure and functions of G.I. tract, Process of digestion and absorption of food, Structure and functions of liver, gallbladder and pancreas.	B.M.	4
4.	Respiratory System: Structure of Lungs and gaseous exchange (oxygen and carbon dioxide transport).	B.M.	4
5.	Musculoskeletal System: Formation and functions of muscles, bones Mechanism of muscle contraction, isometric and isotonic muscle contraction.	B.M.	4

FNT-A- CC-1-2- P:	HUMAN PHYSIOLOGY- I(PRACTICAL)		2 CREDITS
1.	Determination of pulse rate in Resting condition and after exercise (30 beats/10 beats method)	Aritri Nandy & B.M.	2
2.	Determination of blood pressure by Sphygmomanometer (Auscultatory method).	Aritri Nandy & B.M.	2
3.	Measurement of Peak Expiratory flow rate.	Aritri Nandy & B.M.	2
4.	Determination of Bleeding Time (BT) and Clotting Time (CT).	Aritri Nandy & B.M.	2
5.	Detection of Blood group (Slide method).	Aritri Nandy & B.M.	2
6.	Measurement of Haemoglobin level (Sahli's or Drabkinmethod).	Aritri Nandy & B.M.	2

LESSON PLAN 2023 (JAN-JUNE)

2nd Semester Hons.

FNT-A-CC-2-3- Th:	BASIC FOOD SCIENCE - II 4 credits		
SL No	Chapters	Teacher's Name	Hours
1.	Dietary Fibre- Classification, sources, compositions, properties and nutritional significance.	Dr Sangita Manna	2
2.	Minerals and Trace Elements Bio Chemical and Physiological Role, Bio availability & requirements, sources, deficiency and excess: Calcium, Sodium, Potassium, Phosphorus, Iron Fluoride, Zinc, Selenium, Iodine, Chlorine	Dr Sangita Manna Dr Suryatapa Das	3+3
3.	Vitamins- Biochemical and Physiological Role, Bio Availability and Requirements, Sources, Deficiency and Excess	Sajida Khatoon	6
4.	Water- Functions, Daily Requirements, Water Balance	Dr Anindita Ray Chakravarti	2
FNT-A-CC-2-3-P:	BASIC FOOD SCIENCE -II 2 credits		
1.	Determination of Ash content in food	Dr Ankhi Halder	5hours X 7

2.	Determination of Moisture content in food		5hours X7
3.	Determination of Calcium, Iron and Vitamin C content in foods.		3+3+3
FNT-A-CC-2-4-TH:	HUMAN PHYSIOLOGY - II		4 credits
1.	Excretory system: Structure and function of skin, regulation of temperature of body, Structure and functions of kidney in special reference of nephron, Physiology of urine formation.	Aritri Nandy	3
2.	Reproductive system: Structure and functions of gonads, concept of menstrual cycle, Brief idea of pregnancy, parturition, lactation, menopause. Brief concept on spermatogenesis and Oogenesis process.	Aritri Nandy	3
3.	Nervous system: Concept on sympathetic and parasympathetic nervous system. Brief anatomy and functions of cerebrum, cerebellum, hypothalamus and neuron. Concept on synapse and synaptic transmission, Reflexes, Special senses.	BM	3
4.	Endocrine system: Structure and functions of pituitary, thyroid, parathyroid and adrenal gland, Structure and functions of pancreas.	BM	3
FNT-A-CC-2-4-P:	HUMAN PHYSIOLOGY-II (PRACTICAL)		2 credits
1.	Harvard Step test	Aritri Nandy	3
2.	Identification with reasons of histological sites (Lung, Liver, Kidney, Small	Aritri Nandy	4

	intestine, Stomach, Thyroid, Adrenal, Pancreas, Testis, Ovary and Muscle of Mammals.		
3.	Qualitative determination of glucose, acetone in urine.	BM	4
4.	Blood film staining and identification of different types of blood cells.	BM	4

LESSON PLAN 2023 (JUL-DEC)			
3rd Semester Hons.			
FNT-A-CC- 3-5-Th:	HUMAN NUTRITION-I		4 CREDITS
Sl No.	Chapters	Teacher's name	
1.	Concept and definition of terms- Nutrition, Malnutrition and Health: Scope of Nutrition.	Dr Suryatapa Das	2

2.	Minimum Nutritional Requirement and RDA: formulation of RDA and Dietary Guidelines Reference Man and Reference Woman, Adult consumption unit.	Dr Suryatapa Das	3
3.	Energy in Human Nutrition: Idea of Energy and its unit, Energy Balance, Assessment of Energy Requirements deficiency and excess, Determination of Energy in food, B.M.R. and its regulation, S.D.A.	Dr Sangita Manna	4
4.	Growth & Development from infancy to adulthood: Somatic, physical, brain and mental development, puberty, menarch, pre-pubertal and pubertal changes, Factors affecting growth and development. Importance of Nutrition for ensuring adequate development.	Dr Anindita Ray Chakravarti	6
5.	Growth monitoring and promotion: Use of growth charts and standards, Prevention of growth faltering.	Sajida Khatoon	3
FNT-A-CC-3-5-P:	HUMAN NUTRITION-I (PRACTICAL)		2 CREDITS
1.	Process involved in cooking: pressure cooking, microwave,	Dr Sangita Manna	3

	steaming, grilling deep fat frying.		
2.	General concepts of weights and measures. Eye estimation of raw and cooked foods		3
3.	Preparation of food from different food groups and their significance in relation to health.		3
4.	Preparation of supplementary food for different age groups and their nutritional significance.		3
5.	Planning and preparation of low cost diet for Grade 1 and Grade II malnourished child		3
FNT-A-CC-3-6-Th:	COMMUNITY NUTRITION		4 CREDITS
1.	Concept of Community, types of Community, Factors affecting health of the Community.	Dr Suryatapa Das	2
2.	Nutritional Assessment and Surveillance: Meaning, need, objectives and importance	Dr Suryatapa Das	2
3.	Nutritional assessment of human: Clinical findings, nutritional anthropometry, biochemical tests, biophysical methods.	Dr Anindita Ray Chakravarti	3
4.	Diet survey: Need and importance, methods of dietary survey, Interpretation concept of consumption unit, individual and total distribution of food in	Dr Anindita Ray Chakravarti	3

	family, adequacy of diet in respect to RDA, concept of family food security.		
5.	Clinical Signs: Need & Importance's, identifying signs of PEM, vitamin A deficiency and iodine deficiency, Interpretation of descriptive list of clinical signs.	Dr Anindita Ray Chakravarti	3
6.	Nutritional anthropometry Need and importance, standard for reference, techniques of measuring height, weight, head, chest and arm circumference, interpretation of these measurements. Use of growth chart.	Dr Anindita Ray Chakravarti	3
7.	International, national, regional agencies and organisations. Nutritional intervention programmes to combat malnutrition.	Dr Sangita Manna	3
FNT-A-CC-3-6-P:	COMMUNITY NUTRITION (PRACTICAL)		2 Credits
1.	Anthropometric Measurement of infant-Length, weight, circumference of chest, mid-upper arm circumference, precautions to be taken.	Dr Anindita Ray Chakravarti	3
2.	Comparison with norms and		3

	interpretation of the nutritional assessment data and its significance. Weight for age, height for age, weight for height, body Mass Index (BMI) Waist-Hip Ratio (WHR). Skin fold thickness,		
3.	Growth charts-plotting of growth charts, growth monitoring and promotion.		2
4.	Clinical assessment and signs of nutrient deficiencies specially PEM (Kwashiorkor, marasmus) I vitamin A deficiencies, Anaemia, Rickets, B-Complex deficiencies.		3
5.	Estimation of food and nutrient intake: Household food consumption data, adult consumption unit, 24 hours dietary recall 24 hours record, Weighment method, food diaries, food frequency data, use of each of the above, information available through, each individual, collection of data, estimation of intakes.		3
FNT-A-CC-3-7-Th:	FOOD COMMODITIES		4 CREDITS
1.	Cereals and Millets: Structure, processing, storage, use in various	Sajida Khatoon	4

	preparation, variety, selection and cost. Cereal products, breakfast cereals, fast food.		
2.	Pulses and Legumes Structures, Selection and variety. Storage, Processing and use in different preparations, Nutritional aspects and cost.	Dr Suryatapa Das	4
3.	3. Milk and Milk products Composition, Classification, Selection Quality and Cost, Processing, Storage and uses in different preparations, Nutritional aspects, shelf life and spoilage.	Sajida Khatoon	4
4.	Eggs: Production, grade, quality selection, storage and spoilage, cost nutritional aspects and use in different preparations.	Dr Suryatapa Das	4
5.	Meat, Fish and Poultry: Types, Selection, Purchase, Storage, Uses, preparations Cost, Spoilage of fish Poultry and meat.	Dr Sangita Manna	4
6.	Vegetables and Fruits: Variety, Selection, purchase, storage, availability causes and nutritional aspects of raw and processed products and use in different preparations.	Dr Sangita Manna	4
7.	Sugar and sugar Products: Types of natural, sweeteners, manufacture, selection, storage	Dr Ankhi Haldar	4

	and use as preserves, stages in sugar cookery.		
8.	Fats and Oils: Types and sources (animal and vegetable), Processing, uses in different preparations, storage, cost and nutritional aspects.	Dr Suryatapa Das	4
9.	Raising and Leavening agents: Types, constituents, uses in cookery and bakery, storage.	Dr Ankhi Haldar	2
10.	Food Adjuncts: Spices, condiments, herbs, extracts, concentrates essences, food colours, origin, classification, description, uses, specifications, procurements and storage.	Dr Ankhi Haldar	4
11.	Convenience Foods: Role, types, advantages, uses, cost and contribution to diet.	Dr Anindita Ray Chakravarti	2
12.	Salt: Types and uses.	Dr Anindita Ray Chakravarti	2
13.	13. Beverages. Tea; Coffee. Chocolate and Cocoa Powder- Processing, cost and nutritional aspects, other beverages-Aerated beverages, juices.	Dr Anindita Ray Chakravarti	3
FNT-A-CC-3-7-P:	FOOD COMMODITIES (PRACTICAL)		2 CREDITS
1.	Detection of starch, sucrose, sucrose, formalin, boric acid, and	Dr Suryatapa Das	3

	urea in milk.		
2.	Detection of urea in puffed rice.		3
3.	Detection of Vanaspati in Ghee/Butter.		3
4.	Detection of Khesari flour in besan.		3
5.	Detection of Metanil yellow in turmeric/coloured sweet products.		3
6.	Detection of Argemone oil in edible oil.		3
7.	Detection of artificially colour / foreign matter in tea (dust/leaves).		3

LESSON PLAN 2023 (JAN-JUN)			
4th Semester Hons.			
FNT-A-CC-4-8- Th	HUMAN NUTRITION -II		4 Credit Points
SL NO.	Chapter	Teacher's name	
1.	Nutrition during pregnancy: Factors (non nutritional) affecting pregnancy outcome, importance of adequate weight gain during pregnancy, antenatal care and its schedule, Nutritional requirements during pregnancy and modification of existing diet and supplementation. Deficiency of nutrients specially energy, iron, folic acid, protein, calcium, iodine. Common problems of pregnancy and their managements, specially nausea, vomiting, pica, food aversions, pregnancy induced hypertension, obesity, diabetes,	Dr Suryatapa Das	6

	Adolescent pregnancy.		
2.	Nutrition during Lactation: Nutritional requirements during lactation, Dietary management, food supplements, galactogogues, preparation for lactation. Care and preparation of nipples during breastfeeding.	Dr Anindita Ray Chakravarti	4
3.	Nutrition during Infancy: Infant physiology relevant to feeding and care. Breast feeding- colostrum, its composition and importance in feeding, Initiations of breast feeding. Advantages of exclusive breastfeeding. Basic principles of breastfeeding. Introduction of supplementary food, initiation and management of weaning. Baby-led weaning. Bottle feeding- circumstances under which bottle feeding is to be given. Care & sterilisation of bottles. Preparation of formula. Mixed-feeding, breastfeeding and artificial feeding.	Sajida Khatoon	6
4.	Management of preterm and low birth weight babies.	Sajida Khatoon	2
5.	Nutritional needs of toddlers, preschool, school going children and Adolescents- dietary management..	Sangita Manna Ankhi Halder	3+2

FNT-A-CC-4-8-P:	HUMAN NUTRITION-II (PRACTICAL)		2 Credit points
1.	Planning and preparation of adequate meals for different age groups with special reference to different physiological conditions: infants, pre-schooler, school children, adolescents, adults, pregnancy, lactation and old age.	Dr Suryatapa Das	8
FNT-A-CC-4-9-Th:	DIET THERAPY-I		4 Credit Points
1.	Basic concepts of diet therapy: Therapeutic adaptation of normal diet, principles and classification of the therapeutic diets.	Dr Anindita Ray Chakravarti	2
2.	Team approach to health care. Assessment of Patient's needs.	Dr Anindita Ray Chakravarti	2
3.	Routine Hospital Diets: Regular, light, soft, fluids, parenteral, and enteral feeding.	Dr Anindita Ray Chakravarti	3
4..	Diets for different febrile conditions. influenza, malaria and typhoid.	Dr Ankhi Halder	5
5.	Etiological factors, symptoms and management of common diseases of stomach- Gastritis, and peptic ulcer.	Dr Suryatapa Das	2
6.	Etiology, symptoms, and management of intestinal diseases:	Dr Suryatapa	5

	Diarrhoea, Steatorrhoea, Diverticular diseases, Inflammatory bowel disease, Ulcerative Colitis, Flatulence, Constipation, Irritable Bowel Syndrome.	Das	
7.	Diseases of the liver and Biliary system: Liver function tests. Etiology, symptoms, dietary care and general management of Viral Hepatitis and Cirrhosis of liver. Dietary care and management of gallbladder diseases- Cholecystitis and Cholelithiasis.	Sajida Khatoon	5
8.	Anaemia: Geeral concept, aetiology, classificatio and dietary management of Nutritional anaemia.	Dr Sangita Manna	3
FNT-A-CC-4-9-P:	DIET THERAPY-I (PRACTICAL)		2 Credits
1.	Planning and preparation of normal diets.	Dr Anindita Ray Chakravarti	3
2.	Planning and preparation of fluid diets.		3
3.	Planning and preparation of soft/semi solid diets.		3
4.	4. Planning and preparation of Diets for the following diseases: i) Peptic ulcer		3+3+3

	<p>ii) Viral hepatitis</p> <p>iii) Anaemia</p>		
FNT-A-CC-4-10Th	NUTRITIONAL BIOCHEMISTRY-I		4 Credits
1.	Introduction of Biochemistry: Definition, objectives, scope and inter relationship between biochemistry and other biological science.	Dr Tanima Pal	2
2.	Enzymes: Definition, types and classification of enzymes. definition and types of coenzymes. Functions of coenzymes and cofactors, Specificity of enzymes, Isozymes enzymes Kinetics including factors affecting enzyme action. Velocity of enzyme catalysed reactions, regulations of enzyme activity, zymogen, allosteric enzymes, enzyme inhibition.	Sejuti Ray	6
3.	Intermediary metabolism: Carbohydrate Metabolism, Glycolysis, TCA cycle & energy generation, HMS shunt pathway, gluconeogenesis, glycogenesis, glycogenolysis, blood sugar regulation.	Dr Tanima Pal	6
4.	Lipid: Oxidation and biosynthesis	Sejuti Ray	5

	of fatty acids (saturated & mono-unsaturated). Synthesis and unilization of ketone bodies, Ketosis, fatty livers, Essential fatty acids, Cholesterol and its clinical significance.		
FNT-A-CC-4-10-P:	NUTRITIONAL BIOCHEMISTRY-I (PRACTICAL)		2 Credits
1.	Quantitative estimation of Sugars (Glucose, lactose, starch)	Dr Tanima pal and Sejuti Ray	3
2.	Estimation of acid value, iodine value, Saponification value of fats		3
3.	Estimation of blood Glucose		3
4.	Estimation of serum cholesterol		3

LESSON PLAN 2023 (JUL-DEC)			
5th Semester Hons			
FNT-A-CC-5-11-Th:	DIET THERAPY-II		4 CREDITS
Sl No.	Chapters	Teacher's name	
1.	Energy modifications and nutritional care for weight management: Assessment, etiology, complications, prevention and treatment of obesity and underweight.	Dr Anindita Ray Chakravarti	3
2.	Diet in disease of the endocrine pancreas: Diabetes Mellitus: Classification, symptoms, diagnosis, management -insulin therapy, oral hypoglycaemic agents, glucose monitoring at home, dietary care and nutrition therapy, meal plan (with and without insulin), special diabetic foods and artificial sweeteners.	Dr Sangita Manna	4
3.	Hypertension: classification, aetiology, symptoms and dietary management. Diseases of the cardiovascular system: Definition of infarct,	Dr Suryatapa Das	6

	ischemia, angina pectoris, myocardial infarction, heart attack and stroke. Atherosclerosis and hyperlipidaemias – classification, symptoms, dietary and lifestyle management. Prevention of cardiovascular diseases.		
4.	Renal Diseases: Etiology, symptoms and dietary management of acute and chronic Glomerulonephritis. Nephrotic syndrome - dietary management. Uraemia – dietary Nephrolithiasis - dietary management. Use of sodium and potassium exchange list.	Sajida Khatoon	6
FNT-A-CC-5-11-P:	DIET THERAPY-II (PRACTICAL)		2 Credits
	Planning and preparation of Diets for the following diseases: i) Obesity and Underweight ii) Diabetes mellitus iii) Hypertension and Atherosclerosis iv) Acute and chronic glomerulonephritis.	Dr Anindita Ray Chakravarti Sajida Khatun	3+3+3+3+3+ 3
FNT-A-CC-5-12-Th:	NUTRITIONAL BIOCHEMISTRY-II		4 Credits
1.	Brief Introduction of biological	Sejuti Ray	3

	membranes to understand molecular transport, Transport of Large molecules, Receptor mediated endocytosis, exocytosis, Molecular aspects of transport; Passive diffusion, facilitated diffusion, active transport.		
2.	Introduction to Nucleic acids: Structure, replication, transcription, genetic code (in brief) elementary knowledge of biosynthesis of proteins.	Sejuti ray	4
3.	Proteins: General reaction of amino acid metabolism, urea cycle. Lipoproteins: Types, composition, role and significance in disease(in brief).	Dr Tanima Paul	4
4.	Vitamins: Chemistry and biochemical role of fat soluble vitamins. A. D. E. and K. Water soluble vitamins – B1, B2, B6 niacin and C.	Dr Tanima Paul	3
5.	Minerals: Biochemical role of inorganic elements.	Sejuti Ray	3
FNT-A-CC-5-12-P:	NUTRITIONAL BIOCHEMISTRY-II (PRACTICAL)		2 Credits
1.	Qualitative analysis of amino acids	Dr Tanima paul and Sejuti Ray	3

2.	Qualitative analysis of proteins		3
3.	Estimation of serum Protein		4
4.	Estimation of serum creatinine		2
5.	Estimation of serum Urea		2
6.	Estimation of serum Iron, phosphorus, calcium		3+2+2

LESSON PLAN 2023 (JAN-JUN)			
6th Semester Hons.			
FNT-A-CC-6-13-Th:	FOOD MICROBIOLOGY		4 Credits
Sl No.	Chapters	Teacher's name	
1,	1. Brief history of food microbiology and introduction to important microorganisms	Dr Tanima paul	2

	in foods		
2.	Cultivation of microorganisms, Nutritional requirements of microorganisms, types of media used, methods of isolation.	Sejuti Ray	4
3.	Primary sources of microorganisms in foods, physical and chemical methods used in the destruction of microorganism in foods: (Sterilisation & Disinfection).	Sejuti Ray	4
4.	Fundamentals of control of microorganism in foods: Extrinsic and intrinsic parameters affecting growth and survival of microbes, use of high and low temperature, dehydration, freezing, freeze-drying, irradiation and preservatives in food preservation.	Dr Tanima Paul	4
5.	Food Spoilage: Contamination and microorganisms in the spoilage of different kinds of foods and such as cereal and cereal products, vegetable and fruits, fish and other sea foods, meat and meat products, eggs and poultry, milk and products, canned foods.	Sejuti Ray	4

FNT-A-CC-6-13-P:	FOOD MICROBIOLOGY (PRACTICAL)		2 Credits
1.	1. Introduction to microbiology: Use of equipment Understanding and use of compound microscope Use of Autoclave Use of Incubator and Inoculation chamber.	Dr Tanima Paul and Sejuti Ray	2
2.	Microscopic identification of microorganisms (prepared slides): Bacterial, fungal strains.		4
3.	Preparation of liquid and solid media for culture of microorganisms.		6
4.	4. Staining Techniques to study of Morphology of bacterial cells: Simple staining with methylene blue, methyl violet, carbolfuschin, etc. Differential staining with Gram stain technique		4
5.	Microbiological techniques: Pure culture technique-Spread		6

	plate, Pour plate and Streak plate.		
FNT-A-CC-6-14-Th:	FOOD PRESERVATION		4 CREDITS
1.	Food preservation: definition, objectives and principles of food preservation. Different methods of food preservation.	Sajida Khatoon	4
2.	Preserved Products: Jam, Jelly, Marmalade, Sauces, Pickles, Squashes, Syrups-types composition and manufacture, selection, cost, storage, uses and nutritional aspects.	Sajida Khatoon	4
3.	Food Standards ISI, Agmark, FPO, MPO, PFA, FSSAI	Sajida Khatoon	2
FNT-A-CC-6-14-P:	FOOD PRESERVATION (PRACTICAL)		2 CREDITS
1.	Different methods of Food preservation-Drying, Freezing, Frying, canning. bottling etc.	Sajida Khatoon	3
2.	Aseptic handling: Sources of contamination of foods.		3
3.	Preparation of pickles, tomato sauce, chilli sauce, jelly, tomato puree, squashes etc.		3+3+3+3+3

DISCIPLINE SPECIFIC ELECTIVE (DSE) SYLLABUS

LESSON PLAN 2023 (JAN - JUN)			
DSE (Semester I)			
FNT-A- DSE-A- 5-1-Th	PUBLIC HEALTH		4 CREDITS
SL No.	Chapters	Teacher's name	Hours
1.	Health and Dimension of Health: Positive health Versus Absence of disease	M.B.	2
2.	Secondary Sources of		3

	Community Health data :Sources of relevant vital statistics of infant, child & maternal mortality rates		
3.	Immunisation: Importance and Immunization schedule for children, adults and for foreign travellers.		3
4.	Community Water and Waste Management: Importance of water to the community, etiology and effects of toxic agents, water borne infectious agents, sources of water, safe drinking water, potable water, waste and waste disposal, sewage disposal and treatment, solid waste and disposal, liquid waste disposal.		4
5.	Concept of Epidemiology: Study of the epidemiologic approach-determinants of disease preventive & social means.		3
6.	Communicable and infectious disease control: Nature of communicable and infectious diseases, infection, contamination, disinfections, decontamination, transmission-direct & indirect, vector borne disease		4

	infecting organisms and positive agents, environmental agents and epidemiological principles of disease control.		
7.	Public health hazards due to contaminated foods: Food borne infections and intoxications: symptoms, mode of transmission and methods of prevention, investigation and detection of food borne disease out-break.		3
FNT-A-DSE-A-5-1-P	PUBLIC HEALTH (PRACTICAL)		2 Credits
1.	Preparation of 3 audio visual aids like charts, posters, models related to health and nutrition education.	M.B.	3
2.	Formulation and preparation of low cost and medium cost nutritious/ supplementary recipe.		3
3.	Field visit(health centre, immunization centre, ICDS, MCH centre, NGOs etc.).		3

LESSON PLAN 2023 (JUL - DEC)			
DSE (Semester II)			
FNT-A-DSE- A-5-2-Th:	MUSHROOM CULTURE		4 Credits
Sl No.	Chapters	Teacher's name	Credit Points
1.	Definition and characteristics of mushroom.		
2.	Morphology and life cycle of Mushroom.		
3.	Identification and classification of mushroom		
4.	Nutritional and medicinal value of edible mushrooms; poisonous mushrooms		
5.	Types of edible mushrooms available in India- Volvariella volvacea, Pleurotus citrinopileatus, Agaricus bisporus.		
6.	Process of mushroom cultivation.		
7.	Storage and nutrition: short term storage (Refrigeration- upto 24 hours), long term		

	storage (canning, pickles, papads), drying, storage in salt solutions.		
FNT-A- DSE- A-5-2- P	MUSHROOM CULTURE (PRACTICAL)		2 Credits
1.	Visit to Mushroom Culture Centers/ Farms for: Process involved in mushroom cultivation Types and varieties of mushroom Visual Identification of edible and poisonous mushroom Marketing.		
2.	Different Food preparation from mushroom		

LESSON PLAN 2023 (JAN - JUN)			
DSE (Semester III)			
FNTA- DSE- A-6- 3-Th	DIET COUNSELLING AND PATIENT CARE		4 Credits
Sl No.	Chapters	Teacher's name	Credit Points
1.	Introduction to term Dietician: Definition of Dietician , Difference between registered dietician & Nutrition		
2.	Role of dietician in hospital : work area of hospital dietician, role of dietician in hospital		
3.	Role of dietician in community :- work area of community dietician, role of community dietician		
4.	Introduction to Nutrition Care Process: Definition of Nutrition Care Process .Steps of Nutrition Care Process.		

5.	Nutrition Assessment:-Definition , Nutrition assessment component, Critical thinking		
6.	6. Nutrition Diagnosis: nutrition diagnosis domain:- intake, clinical, behavioral – environmental		
7.	Nutrition diagnosis component• nutrition vs. medical diagnosis.		
8.	Nutrition Interventions: Definition and objectives		
9.	Nutrition Monitoring & Evaluation : Definition, Nutrition monitoring & evaluation components, nutrition goals & objectives. Evaluation of nutrition care		
FNT-A- DSE- A-6- 3-P:	DIET COUNSELLING AND PATIENT CARE (PRACTICAL)		2 Credits
1.	Visit and training to hospitals/nursing homes for 7-15 days : 1 Taking Case history and study 2 Routine Hospital diet 3 Distribution of food from kitchen to individual patient with specific diet. 4 Dietary management of patient in different diseases and diet chart for the particular patient. 5 Role of dietitian /nutritionist in diet counselling		

LESSON PLAN 2023 (JUL - JUN)			
DSE (Semester IV)			
FNT-A-DSE- A-6-4-Th	GERIATRIC NUTRITION		4 CREDITS
SL No.	Chapters	Teacher's name	Credit Points
1,	Definition of ageing, senescence, old age or aged people, gerontology, geriatrics, and Geriatric nutrition. Classification of old population.	Dr Sangita Manna	3
2.	Physiological and biochemical changes during old age.	Dr Sangita Manna	4
3.	Assessment of nutritional status of older adults.	Dr Suryatapa Das	3
4.	Nutritional requirements and general dietary guidelines for elderly .	Dr Suryatapa Das	3
5.	Major nutritional and health problems during old age.	Dr Suryatapa Das	2
FNT-A-DSE- A-6-4-P	GERIATRIC NUTRITION (PRACTICAL)		2 Credits
1.	Visit to old- age homes.	Dr. Sangita Manna	3
2.	Preparation of dishes suitable for	Dr. Sangita	3

	older person- soft, semisolid and easily digestible balanced diet.	Manna	
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LESSON PLAN 2023 (JAN - JUN)**DSE (Semester V)**

FNT-A-DSE- B-5-1-Th:	THEORIES OF HUMAN DEVELOPMENT		4 Credits
Sl No	Chapters	Teacher's name	Credit Points
1.	Introduction to theories in Human Development: Key themes in the study of Human Development- Nature/nurture, active/ passive, continuity/discontinuity, individual differences and similarities. Understanding a theory, Role of theories in understanding Human Development.		
2.	Perspectives on Human Development : Evolutionary and Ethological /Biological: Darwin, Lorenz, Bowlby, Ecological: Bronfenbrenner, Behavioural: Pavlov, Skinner, Bandura		
3.	Selected theories of human development : Psychodynamic; psychosexual and psychosocial theories; Freud, Erikson, Cognition: Piaget, Vygotsky, Models and Theories of Intelligence:		

	Guilford, Spearman and Gardener, Humanistic: Maslow and Rogers.		
4.	Theories in everyday life: Eclectic theoretical orientation, Ethno theories.		
FNT-A-DSE-B-5-1-P	THEORIES OF HUMAN DEVELOPMENT (PRACTICAL)		2 Credits
1.	Biography of a theorist with a focus on his/her family life and childhood experiences.		
2.	Depict the 'eco-cultural' network for a child using the ecological model		
3.	Verification of selected theories using multiple methods.		
4.	Observe/ analyze creation of media product for children or product such as toys/ clothes using theoretical base.		
5.	Locate a tool/ scale of psychometric tests and administer it.		
6.	. Autobiography		
FNT-A-DSE-B-5-2-Th:	NON-FORMAL ADULT AND LIFE LONG EDUCATION		4 Credits
1.	Non Formal Education, Difference between formal & Non-Formal Education,		

	<p>Significance of Non-Formal Education in India</p> <p>New education policy & NFE</p> <p>Scope of NFE in communities-</p> <p>Techniques of community study,</p> <p>Domains of Non-Formal Education</p>		
2.	<p>Organizing NFE programmes- target group; Physical aspects; organizing and implementation</p> <p>Publicity of Non-Formal Programme; Planning and implementing publicity plan.</p>		
3.	<p>Adult Education: Meaning, concept and scope of Adult Education, Adult Education programme in India, Adult Education and Extension, Characteristics of Adult Learners,</p> <p>Difference between Adult & Child learning Learning theories; Characteristics of Adult learning, developmental tasks of Adults, Factors associated with Adult learning, Motivating and sustaining Adult learners.</p>		
4.	<p>Life Long Education : Definition, meaning and concept of Life Long Education, Life Long</p>		

	<p>Education: Historical and contemporary perspectives, Components and objectives of Life Long Education, Significance of Life Long Education in contemporary society, Forms and domains of Life Long Education, Principles of Life Long Education</p>		
5.	<p>Methods and Material for Non Formal/Adult/ Life Long Education: Methods and approaches for organizing NFE programmes for different target groups, Scope of communication methods and materials for NFE objectives</p>		
6.	<p>Programmes of Non Formal/Adult/ Life Long and Continuing Education: National and international programmes. Local, State, National and international agencies- policy and programmes, Monitoring and evaluation of NFE /Adult/ Life Long and Continuing Education programmes .</p>		
FNTA-DSE-	NON-FORMAL ADULT		2 Credits

B-5-2-P:	AND LIFE LONG EDUCATION (PRACTICAL)		
1.	Visits to different NGO's involved in Non Formal/Adult/Life Long Education.		
2.	Inviting experts from Government/Universities/ NGO's to share their experience of Non Formal/Adult/Life Long Education.		
3.	Reporting of Literacy news, events from periodicals and news papers.		
4.	Planning and organizing NFE/ continuing education programmes		
5.	Monitoring and Evaluation of programmes.		

LESSON PLAN 2023 (JAN - JUN)		
DSE (Semester VI)		
FNT-A- DSE-B-6-3- Th	CHILDHOOD DISABILITY AND SOCIAL ACTION	4 Credits

SL No.	Chapters	Teacher's name	Credit Points
1.	Understanding Disability and Inclusion: Defining and understanding disability, Rights of persons with disability and UNCRPD, Perspective on disability: Individual and social, Attitudes towards disability- family, school, society and media		
2.	Types of Disability: Identification, assessment and etiology with reference to: Physical disabilities, Intellectual disability, Sensory disabilities- Visual and auditory IV. Learning disability, Autism		
3.	Disability and society: Overview of practices and provisioning related to addressing disability in India, Prevention, therapy, education and management, Families of children with disabilities, Policy and laws		
FNT-A- DSE-B-6-3- P:	CHILDHOOD DISABILITY AND SOCIAL ACTION (PRACTICAL)		2 Credits
1.	Visits- Government and Private Institutions and Organisations (CGC, schools,		

	NGO's, Hospitals)		
2.	Observe the context		
3.	Case profile of child with disability		
4.	Program planning		
5.	Planning developmentally appropriate material for children with disability		
FNT-A- DSE-B-6-4- Th:	CHILD RIGHTS AND GENDER JUSTICE		4 Credits
1.	Introduction to Child Rights: Concept of Child rights, Demographic profile of Indian children, Disadvantage, deprivation and social exclusion with reference to children, Laws, policies and programmes for children in India, UNCRC.		
2.	Children in need of care and protection: Vulnerable groups: causes and consequences. Street, homeless, institutionalized and working children Child Abuse, Child Trafficking, Children in conflict with the law, Children living with: chronic Illness, HIV.		
3.	Social construction of gender Socialization for gender: gender roles, stereotypes and identity, Gender in the workplace and in public		

	spaces, Contemporary influences: media and popular culture, Demographic profile of women and children in India.		
4.	Gender and Indian society : Sex and Gender, Masculinity and Femininity, biological and cultural determinants, Patriarchy and social institutions, Being male and female in Indian society-social traditions and contemporary issues, Exploring the issues of violence against females, Laws, policies and programmes for children and women.		
FNT-A-DSE-B-6-4-P	CHILD RIGHTS AND GENDER JUSTICE(PRACTICAL)		2 Credits
1.	Visits to organizations working in the area of Child Rights and Gender to understand their objectives programmes and experiences.		
2.	. Workshops on relevant issues like Gender, domestic violence, gendering of public spaces.		
3.	Understanding child rights and gender issues in diverse social groups through field visits. and interactions		
.4.	Media portrayals of women and children.		

SKILL ENHANCEMENT COURSE(SEC)

LESSON PLAN 2023 (JUL - DEC)			
SEC (Semester III)			
FNT-A- SEC-A-3- 1-Th:	SPORTS NUTRITION		2 Credits
SL NO	Chapters	Teacher's name	Credit Points
1.	Definition of physical activity, exercise, physical fitness, sports physiology and sports nutrition.	Aritri Nandy	3
2.	Benefits of physical activity and exercise.	Aritri Nandy	3

3.	Classification of Sports activities.	Aritri Nandy	3
4.	Nutritional requirements of sports person.	Aritri Nandy	3
5.	Pre- event meal.	Aritri Nandy	2
FNT-A- SEC-A-3- 2-Th:	FOOD SERVICE MANAGEMENT		2 Credits
1.	Organization of food service management: Definition, Various types of Food Service institutions, their characteristics and functions.	Sajida Khatoon	3
2.	Planning a food service unit, layout design, planning of different work areas – preparation, cleaning, storing, serving and dining areas. Lighting and ventilation, working heights in relation to equipment.	Sajida Khatoon	4
3.	Institutional Menu Planning: Factors influencing menu planning, principles of menu planning, different kinds of menus.	Sajida Khatoon	3
4.	Quality food Service – types-Centralized, de-centralized objectives. Styles of service.	Sajida Khatoon	3
5.	Importance of sanitation and hygiene in food, kitchen hygiene, Hygienic handling of Food, employee's health, hygiene of food	Sajida Khatoon	3

	service unit.		
6.	Personnel Management- selection, training and supervision of personnel, criteria for selection of Dietitian and Food Service staff.	Sajida Khatoon	3
SEMESTER IV			
FNTA- SEC- B-4- 1-Th:	NUTRITION AND HEALTH EDUCATION		2 Credits
1.	Concept, objectives and importance of nutrition and health education	Anindita Chakraborty	2
2.	Principles of health education.	Anindita Chakraborty	2
3.	Nutrition and health education communication process.	Anindita Chakraborty	2
4.	Steps in planning health and nutrition education.	Ankhi Haldar	2
5.	Methods involved in nutrition and health education	Ankhi Haldar	4
6.	Evaluation of nutrition and health education programmes.	Ankhi Haldar	2
FNT-A- SEC-B-4- 2-Th:	BAKERY SCIENCE		2 Credits
1.	Introduction and scope of bakery science.		
2.	Common bakery terms		
3.	Flours: Constituents of flour, water absorption power, gluten, grades of flour.		

4.	Raw materials required for bread and cake making.		
5.	Role of flour, water , yeast, salt, sugar, milk and fats in bakery.		
6.	Bread and cake making process		
7.	Bread improver.		
8.	Knowledge of oven and baking temperatures.		
9.	Preparation of basic cookies, biscuits and pastries		

LESSON PLAN (2023) JUL-DEC			
1st Semester GENERAL			
FNT-G- CC/GE-1- 1Th	ELEMENTARY CHEMISTRY		4 CREDITS
Sl no	Chapters	Teacher's name	
1.	Law of conservation of mass, chemical and physical changes, Mechanical mixtures and chemical compounds	Sejuti Ray	2
2.	Common Laboratory Processes: Sedimentation, Decantation, Filtration, Solution, Evaporation, Boiling, Desiccation, Distillation, Sublimation, Fusion, Ignition, Crystallisation, Efflorescence, Deliquescence.	Tanima Paul	2
3.	Symbol, Valency, Formula, Equation, Naming of Compounds, Radicals.	Sejuti Ray	2

4.	General concept of acids, bases and salts, conjugate acids and bases, Classification of salts, Hydrolysis of salts, pH, Buffer solution. Equivalent weight of acids, bases and salts, neutralisation, Acid-Base indicators, Molar solution, Normal solution and Formula solution.	Tanima Paul	2
5.	Diffusion and Osmosis, Osmotic pressure, Isotonic solution, Definition and examples.	Sejuti Ray	2
6.	Colloids: Definition, Types of colloidal systems, Important properties of colloidal sols, Dialysis.	Tanima Paul	2
7.	Structure of atom: Discovery of atomic nucleus, Rutherford's atomic model, concept of Stationary orbit, Electronic arrangement of elements (Hydrogen to calcium), Atomic number, Isotopes, Chemical bonds – Electrovalent, Covalent and coordinate – covalent bonds, Hydrogen bonds.	Sejuti Ray	2
8.	Chemistry of carbon compounds: Classification of organic	Tanima Paul	2

	<p>compounds based on structural characteristics and functional groups, isomerism, Concept of optical isomerism. General methods of preparation, properties and reactions of structured and unstructured hydrocarbons, Aliphatic monohydric alcohols, Glycerol, Aldehyde, Ketones and fatty acids upto 3 atoms with nomenclature</p>		
FNT-G-CC/GE-1-1 P	ELEMENTARY CHEMISTRY (PRACTICAL)		2 Credits
1.	Fitting of simple apparatus, experiment involving solution, filtration, distillation, and crystallization. Separation of constituents of mixture	Tanima Paul	3
2.	Titration of acids and bases. Determination of total hardness of water by soda reagent. Estimation of glucose.	Sejuti Ray	3
3.	Simple chemical tests for carbohydrate- Starch, glucose, cane sugar, lactose, and dextrin	Sejuti Ray	3
4.	Qualitative tests-Protein in milk and egg, Calcium, phosphorus, and	Tanima Paul	3

	iron in foodstuff		
LESSON PLAN (2023) JAN-JUNE			
2NDSemester GENERAL			
FNT-G- CC/GE-2-2- Th	ELEMENTARY PHYSICS		4 CREDIT S
Sl no	Chapters	Teacher's name	
1.	Units –C.G.S. and F.P.S. system	Suryatapa Das	2
2.	Measurement of mass and weight, common and spring balance.	Suryatapa Das	2
3.	Motion of body – displacement, velocity, acceleration units	Suryatapa Das	2
4.	Gravity – Acceleration due to gravity.	Suryatapa Das	2
5.	Hydrostatics–Pressure at a point, Archimedes Principles, Specific gravity, viscosity and surface tension	Suryatapa Das	2
6.	Thermometry	Suryatapa Das	2
7.	Calorimetry.	Suryatapa Das	2
8.	Transmission of heat, Thermoflask.	Suryatapa Das	2
9.	Three types of matter, changes of state, pressure cooker, Ice-machine	Suryatapa Das	2
10.	Static electricity – Charging by friction, conductor and Insulator.	Sejuti Ray	2
11.	Primary cell, storage cell.	Sejuti Ray	2
12.	Electroplating.	Sejuti Ray	2
13.	Definition of Potential, Current-relation between two.	Sejuti Ray	2

14.	Measurement of current by ammeter and potential differential by voltmeter.	Sejuti Ray	2
15.	Electricity and its application in daily life – lamp, Toaster, Geysers, iron, Microoven	Sejuti Ray	2
16.	Refrigerator, cold storage.	Sejuti Ray	2
17.	Electric fuse.	Sejuti Ray	2
FNT-G-CC/GE-2-2-P	ELEMENTARY PHYSICS(PRACTICAL)		2 Credits
1.	Use of balance (Weighing a body)	Dr. Sima Chakrabarti	3
2.	Determination of specific gravity of a solid (heavier and insoluble in water).	Dr. Sima Chakrabarti	3
3.	Determination of specific gravity of a liquid by hydrostatic balance.	Dr. Sima Chakrabarti	3
4.	Determination of specific gravity of a liquid by specific gravity bottle	Dr. Sima Chakrabarti	3
5.	Reading of barometer	Dr. Sima Chakrabarti	2
6.	Determination of lower and upper fixed point of a thermometer	Dr. Sima Chakrabarti	2
7.	Fitting of electric fuses.	Dr. Sima Chakrabarti	2

LESSON PLAN (2023) JULY-DEC

3RDSemester GENERAL			
FNT-G- CC/GE-3- 3Th	ELEMENTARY PHYSIOLOGY		4 CREDITS
Sl no	Chapters	Teacher's name	
1.	Animal cell: Structure and function	Aritri Nandy	3
2.	Tissue: Definition, structure and functions of different types of tissue, e.g. epithelial, connective, nervous and muscular tissue (special emphasis on blood and bone) .	Aritri Nandy	3
3.	Digestive system: Structure involve in digestive system (mouth, esophagus, stomach, small intestine, large intestine, liver, pancreas, gall bladder) and their functions. Digestion and absorption of Carbohydrate, protein and fat.	BM	4
4.	Elementary idea of metabolism, enzymes and hormones- name and their important functions. Metabolism in brief (Glycolysis, Glycogenesis, Gluconeogenesis, Cori's cycle, Kreb's cycle, Deamination, Transamination. Role of hormones in carbohydrate metabolism.	BM	4

FNT-G- CC/GE-3-3- P	ELEMENTARY PHYSIOLOGY (PRACTICAL)		2 Credits
1.	Demonstration for determination of blood pressure of humans being- (a) systolic and b) diastolic.	Aritri Nandy + BM	3
2.	Identification of slides (Blood cells, Stomach, Small intestine, large intestine, Liver, pancreas).	Aritri Nandy + BM	3
3.	Determination of Bleeding Time (BT) and Clotting Time (CT).	Aritri Nandy + BM	3
4.	Detection of Blood group	Aritri Nandy + BM	3

LESSON PLAN (2023) JAN-JUNE

4THSemester GENERAL

FNT-G- CC/GE-4-4- Th	BASIC NUTRITION AND FOOD SCIENCE		4 CREDITS
Sl no	Chapters	Teacher's name	
1.	Definition of Food, Nutrition, Nutrient, Nutritional status, Dietetics, Balance diet, Malnutrition, Energy (Unit of energy – Joule, Kilocalorie).	Dr. Sangita Manna	3
2.	Carbohydrate, Protein, Fat, Vitamins and Minerals (calcium, phosphorus, sodium,	Dr. Sangita Manna	6

	potassium, iron, iodine, fluorine)-sources, classification, functions, deficiencies of these nutrients. Functions of water and dietary fiber.		
3.	B.M.R: Definition, factors affecting B.M.R. and Total Energy Requirement (Calculation of energy of individuals).	Dr. Suryatapa Das	3
4.	Basic five food groups: Nutritional significance of cereals, pulses, milk, meat, fish, vegetable, egg, nuts, oils, sugar.	Dr. Ankhi Halder	4
5.	Principles and objectives of meal planning. Diet for an infant (Breast feeding versus Bottle feeding).Preschool child, school child, Normal male and female of different occupation.	Dr. Ankhi Halder	4
FNT-G-CC/GE-4-4-P	BASIC NUTRITION AND FOOD SCIENCE (PRACTICAL)		2 Credits
1.	Elementary idea of weight and measure.	Dr. Sangita Manna	3
2.	Preparation of cereals, pulses, vegetable, egg, milk, fish, nuts	Dr. Sangita Manna	3

3.	Demonstration of jam, jelly, squash, pickles.	Dr. Sangita Manna	3
4.	Planning and preparation of diet often adult male/female Modification of diet during pregnancy and lactation.	Dr. Sangita Manna	3

DISCIPLINE SPECIFIC ELECTIVE (DSE) SYLLABUS
(DSE-A (Opt any one in Semester-5))

LESSON PLAN 2023 (JAN - JUN)			
DSE (Semester 5)			
FNT-G-DSE-A- 5-1-Th	COMMUNITY NUTRITION		4 CREDITS
SL No.	Chapters	Teacher's	Credit

		name	Points
1.	Concept and types of Community. Concept of community nutrition	Dr. Sangita Manna	2
2.	Nutritional Assessment: Meaning, need, objectives and importance. A brief idea on methods of nutritional assessment.	Dr. Sangita Manna	3
3.	Elementary idea of health agencies - FAO, WHO, ICMR, ICDS, ICAR, CSIR, ANP, VHAI, NIN and CFTRI. Role of voluntary health organisation in the improvement of Community health.	Dr. Sangita Manna	2
4.	Nutritional Intervention programmes to combat malnutrition. Concept of food fortification and food enrichment.	Dr. Sangita Manna	3
5.	Nutrition Education: Definition, objectives of nutrition education. Methods of imparting nutrition education.	Dr. Sangita Manna	3
FNT-G-DSE-A-5-1-P	COMMUNITY NUTRITION (PRACTICAL)		2 Credits
1.	Preparation of homemade ORS.	Dr. Sangita Manna	2

2.	Preparation of weaning foods for infants.	Dr. Sangita Manna	2
3.	Preparation of low cost and medium cost school tiffin	Dr. Sangita Manna	3
4.	Diet survey by 24 hours recall method	Dr. Sangita Manna	2

LESSON PLAN 2023 (JAN - JUN)			
DSE (Semester 5)			
FNT-G-DSE- A-5-2-Th	PUBLIC HEALTH		4 CREDITS
SL No.	Chapters	Teacher's name	Credit Points
1.	Concept of health and community health. Factors affecting Community health		
2.	Maternal and Child mortality: Definitions and causes, Role of health workers in the improvement of maternal and child health.		
3.	Immunization: Importance and Immunization schedule for children and adults.		
4.	General idea about the contamination of food (Chemical and microbial)-Sources and transmission, Elementary ideas about food toxins, aflatoxin & food toxicology		

	with reference to Lead, Cadmium & Zinc.		
5.	Contamination of water and prevention of contamination, different methods of water purification, water –borne diseases, elementary idea of microbiology of water-borne pathogens, diarrhoea, dysentery, typhoid, hepatitis, preventive measures and dietary management of such diseases.		
FNT-G-DSE- A-5-2-P	PUBLIC HEALTH(PRACTICAL)		2 Credits
1.	Calculation of BMI of an individual and interpretation of result.		
2.	Growth charts - plotting of growth charts for growth monitoring		
3.	Formulation and demonstration of nutrition education tools such as charts, posters, models related to health and nutrition education.		

DISCIPLINE SPECIFIC ELECTIVE (DSE) SYLLABUS

(DSE-B (Opt any one in Semester-5))

LESSON PLAN 2023 (JAN - JUN)			
DSE (Semester 5)			
FNT-G- DSE-B-6- 1-Th	CLINICAL NUTRITION		4 CREDITS
SL No.	Chapters	Teacher's name	Credit Points
1.	Definition of Dietetics, dietitian, Goals of Diet Therapy		
2.	Basic concepts of Diet Therapy: Therapeutic adaptations of the normal diet. Routine hospital diets –Regular, soft, full fluid, clear fluid diet. Specially modified therapeutic diets		
3.	Obesity and underweight: Causes, risk factors, dietary and general management of overweight and underweight.		
4.	Diarrhoea, Constipation and Jaundice: Causes, symptoms and dietary management.		
5.	Anaemia: Definition, causes, classification,		

	and dietary management of Nutritional anaemia.		
6.	Hypertension, Atherosclerosis and Diabetes mellitus: Definition, Causes, Types, risk factors, Signs, Symptoms and dietary Management.		
7.	Fever: Definition, causes, types, symptoms and dietary management.		
FNT-G-DSE-B-6-1-P:	CLINICAL NUTRITION(PRACTICAL)		2 Credits
1.	1. Planning and preparation of Therapeutic Diets for the following diseases: i) Diabetes mellitus ii) Hepatitis iii) Hypertensi iv)Obesity		

LESSON PLAN 2023 (JAN - JUN)			
DSE (Semester 5)			
FNT-G-DSE-B-6-2-Th	FOOD SAFETY AND QUALITY CONTROL		4 CREDITS
SL No.	Chapters	Teacher's name	Credit Points
1.	The relationship of microorganisms to sanitation, Effects of microorganisms on food degradation and food-borne illnesses.		
2.	Importance of personal hygiene of food		

	handlers: Habits, clothes, illness, education of food handlers in handling and serving food. Concept of food contamination		
3.	Food Safety: Definition and factors affecting food safety, safety of left over foods. Control of Food spoilage		
4.	Food Adulteration: Definition, reasons and types. Adulterants in common food items		
5.	Food Laws and Standards: i) Codex Alimentations ii) Prevention of Food Adulteration (PFA) Act iii) Agmark iv) Fruit Products Order (FPO) v) Meat Products Order (MPO) vi) Bureau of Indian Standards (BIS) vii) Food Standards and Safety Authority of India(FSSAI)		
FNT-G-DSE-B-6-2-P	FOOD SAFETY AND QUALITY CONTROL(PRACTICAL)		2 Credits
1.	1. Detection of common adulterant in food: i) Khesari flour in besan ii) Vanaspati in Ghee/Butter. iii) Dried papaya seeds in black pepper iv) Metanil yellow in turmeric or coloured sweet products. v) Artificially foreign matter in tea (dust/leaves).		

SKILL ENHANCEMENT COURSE(SEC)

SEC-A (Opt any one either in semester-3 or in Semester-5)

LESSON PLAN 2023

SEC (Semester III/V)			
FNT-G- SEC- A- 3/5-1-Th	FOOD PRESERVATION		2 Credits
SL NO	Chapters	Teacher's name	Credit Points
1.	Elementary idea on food preservation: principles and different methods – drying, freezing, frying, canning etc.		
2.	Methods of preparation and packaging of jam, jelly, chilli sauce, tomato ketchup, squash, pickles etc		
FNT-G- SEC-A- 3/5-2-Th:	NUTRITION AND FITNESS		2 Credits
1.	Understanding Fitness: Definition of fitness, health and related terms. Assessment of fitness, Approaches for keeping fit.	Dr. Sangita Manna	2
2.	Importance and benefits of physical activity: Physical Activity – frequency, intensity, time and type with examples Physical Activity, physical activity guidelines and physical activity pyramid.	Dr. Sangita Manna	3
3.	Importance of nutrition Role of nutrition in fitness, Nutritional guidelines for health and fitness, Nutritional supplements.	Dr. Sangita Manna	3
4.	Importance of diet and exercise for	Dr. Sangita	3

	weight management	Manna	
LESSON PLAN 2023			
SEC (Semester IV/VI)			
SEC-B (Opt any one either in semester-4 or in Semester-6)			
FNT-G- SEC-B- 4/6-1-Th	GERIATRIC NUTRITION		2 Credits
SL NO	Chapters	Teacher's name	Credit Points
1.	Definition of ageing, senescence, old age or aged people, gerontology, geriatrics, and Geriatric nutrition.	Dr. Sangita Manna	3
2.	Physiological changes during old age.	Dr. Sangita Manna	3
3.	Nutritional requirements and general dietary guidelines for elderly .	Dr. Sangita Manna	3
4.	Major nutritional and health problems during old age.	Dr. Sangita Manna	3
FNT-G- SEC-B- 4/6-2-Th:	BAKERY SCIENCE		2 Credits
1.	Introduction and scope of bakery science.		
2.	Common bakery terms		
3.	Flours: Constituents of flour, water absorption power, gluten, grades of flour.		
4.	Raw materials required for bread and cake making.		

5.	Role of flour, water , yeast, salt, sugar, milk and fats in bakery.		
6.	Bread and cake making process.		
7.	Bread improver.		
8.	Knowledge of oven and baking temperatures.		
9.	Preparation of basic cookies, biscuits and pastries		