

DEPARTMENT OF FOOD AND NUTRITION  
SYLLABUS MODULE-CBCS CURRICULUM ( GENERAL)

Semester	Course	Topic	Faculty	No of classes
FIRST SEMESTER	FNT-G-CC/GE-1-1Th: ELEMENTARY CHEMISTRY	1. Law of conservation of mass, chemical and physical changes, Mechanical mixtures and chemical compounds	Debarati Mukherjee	4
		2. Common Laboratory Processes: Sedimentation, Decantation, Filtration, Solution, Evaporation, Boiling, Desiccation, Distillation, Sublimation, Fusion, Ignition, Crystallisation, Efflorescence, Deliquescence.		6
		3. Symbol, Valency, Formula, Equation, Naming of Compounds, Radicals.		4
		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.		6
		5. Diffusion and Osmosis, Osmotic pressure, Isotonic solution, Definition and examples.		4
		6. Colloids: Definition, Types of colloidal systems, Important properties of colloidal sols, Dialysis.		4
		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.		8
		8. Chemistry of carbon compounds: Classification of organic 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.		10
		<b>Continuous Internal Evaluation(MCQ)</b>		2
	FNT-G-CC/GE-1-1 P: ELEMENTARY CHEMISTRY	1. Fitting of simple apparatus, experiment involving solution, filtration, distillation, and crystallization. Separation of constituents of mixture.		4
		2. Titration of acids and bases. Determination of total hardness of water by soda reagent. Estimation of glucose.		6
		3. Simple chemical tests for carbohydrate- Starch, glucose, cane sugar, lactose, and dextrin.		6
		4. Qualitative tests-Protein in milk and egg, Calcium, phosphorus, and iron in foodstuff.		4

Semester	Course	Topic	Faculty	No of classes
SECOND SEMESTER	FNT-G-CC/GE-2-2- Th: ELEMENTARY PHYSICS	1. Units –C.G.S. and F.P.S. system	Debarati Mukherjee	2
		2. Measurement of mass and weight, common and spring balance.		4
		3. Motion of body – displacement, velocity, acceleration units.		4
		4. Gravity – Acceleration due to gravity.		4
		5. Hydrostatics–Pressure at a point, Archimedes Principles, Specific gravity, viscosity and surface tension.		4
		6. Thermometry.		2
		7. Calorimetry.		2
		8. Transmission of heat, Thermoflask.		2
		9. Three types of matter, changes of state, pressure cooker, Ice-machine.		4
		10. Static electricity – Changing by friction, conductor and Insulator.		4
		11. Primary cell, storage cell.		2
		12. Electroplating.		1
		13. Definition of Potential, Current-relation between two.		2
		14. Measurement of current by ammeter and potential differential by voltmeter.		2
		15. Electricity and its application in daily life – lamp, Toaster, Geyser, iron, Micro- oven.		2
		16. Refrigerator, cold storage.		2
		17. Electric fuse.		1
	<b>Continuous Internal Evaluation(VIVA-VOCE)</b>			2
	FNT-G-CC/GE-2-2- P:ELEMENTARY PHYSICS (PRACTICAL)	1. Use of balance( Weighing a body)		2
		2. Determination of specific gravity of a solid (heavier and insoluble in water).		2
		3. Determination of specific gravity of a liquid by hydrostatic balance.		2
		4. Determination of specific gravity of a liquid by specific gravity bottle.		2
		5. Reading of barometer.		2
		6. Determination of lower and upper fixed point of a thermometer.		2
		7. Fitting of electric fuses.		2

Semester	Course	Topic	Faculty	No of classes	
THIRD SEMESTER	FNT-G-CC/GE-3-3Th: ELEMENTARY PHYSIOLOGY	1. Animal cell: Structure and function.	Debarati Mukherjee	4	
		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) .		6	
		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.		6	
		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.		10	
		<b>Continuous Internal Evaluation(VIVA-VOCE)</b>		2	
	FNT-G-CC/GE-3-3P: ELEMENTARY PHYSIOLOGY (PRACTICAL)	1. Demonstration for determination of blood pressure of humans being- (a) systolic and b) diastolic.		2	
		2. Identification of slides ( Blood cells, Stomach, Small intestine, large intestine, Liver, pancreas).		4	
		3. Determination of Bleeding Time (BT) and Clotting Time (CT).		6	
		4. Detection of Blood group.		4	
	FNT-G-SEC- A-3/5-1 Th: FOOD PRESERVATION	1. Elementary idea on food preservation: principles and different methods – drying, freezing, frying, canning etc.		Sohini Roy	6
		2. Methods of preparation and packaging of jam, jelly, chilli sauce, tomato ketchup, squash, pickles etc.			8
		<b>Continuous Internal Evaluation(VIVA-VOCE)</b>			2

Semester	Course	Topic	Faculty	No of classes
FOURTH SEMESTER	FNT-G- CC/GE-4-4- Th: BASIC NUTRITION AND FOOD SCIENCE	1. Definition of Food, Nutrition, Nutrient, Nutritional status, Dietetics, Balance diet, Malnutrition, Energy (Unit of energy – Joule, Kilocalorie).	Sohini Roy	2
		2. Carbohydrate, Protein, Fat, Vitamins and Minerals (calcium, phosphorus, sodium, potassium, iron, iodine, fluorine)- sources, classification, functions, deficiencies of these nutrients. Functions of water and dietary fiber.	Arpita Srimani	12
		3. B.M.R: Definition, factors affecting B.M.R. and Total Energy Requirement (Calculation of energy of individuals).	Arpita Srimani	4
		4. Basic five food groups: Nutritional significance of cereals, pulses, milk, meat, fish, vegetable, egg, nuts, oils, sugar.	Sohini Roy	12
		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.	Sohini Roy	10
		<b>Continuous Internal Evaluation(VIVA-VOCE)</b>	Sohini Roy	2
	FNT-G-CC/GE-4-4- P: BASIC NUTRITION AND FOOD SCIENCE (PRACTICAL)	1. Elementary idea of weight and measure.	Arpita Srimani	2
		2. Preparation of cereals, pulses, vegetable, egg, milk, fish, nuts.	Arpita Srimani	6
		3. Demonstration of jam, jelly, squash, pickles.	Sohini Roy	4
		4. Planning and preparation of diet often adult male/female Modification of diet during pregnancy and lactation.	Sohini Roy	6
	FNT-G-SEC-B-4/6-1- Th: GERIATRIC NUTRITION	1. Definition of ageing, senescence, old age or aged people, gerontology, geriatrics, and Geriatric nutrition.	Debarati Mukherjee	2
		2. Physiological changes during old age.		4
		4. Nutritional requirements and general dietary guidelines for elderly .		4
		5. Major nutritional and health problems during old age.		4
		<b>Continuous Internal Evaluation(VIVA-VOCE)</b>		2

Semester	Course	Topic	Faculty	No of classes
FIFTH SEMESTER	FNT-G-DSE-A-5-1- Th: COMMUNITY NUTRITION	1. Concept and types of Community. Concept of community nutrition.	Sohini Roy	2
		2. Nutritional Assessment: Meaning, need, objectives and importance. A brief idea on methods of nutritional assessment.	Sohini Roy	6
		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.	Arpita Srimani	6
		4. Nutritional Intervention programmes to combat malnutrition. Concept of food fortification and food enrichment.	Sohini Roy	8
		5. Nutrition Education: Definition, objectives of nutrition education. Methods of imparting nutrition education.	Arpita Srimani	6
		<b>Continuous Internal Evaluation(VIVA-VOCE)</b>	Arpita Srimani	2
	FNT-G-DSE-A-5-1-P: COMMUNITY NUTRITION (PRACTICAL)	1. Preparation of homemade ORS.	Sohini Roy	2
	2. Preparation of weaning foods for infants.	Sohini Roy	4	
	3. Preparation of low cost and medium cost school tiffin.	Arpita Srimani	4	
	4. Diet survey by 24 hours recall method.	Sohini Roy	6	

Semester	Course	Topic	Faculty	No of classes
SIXTH SEMESTER	FNT-G-DSE-B-6-1- Th: CLINICAL NUTRITION	1. Definition of Dietetics, dietitian, Goals of Diet Therapy.	Arpita Srimani	2
		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.	Sohini Roy	6
		3. Obesity and underweight: Causes, risk factors, dietary and general management of overweight and underweight.	Arpita Srimani	4
		4. Diarrhoea, Constipation and Jaundice: Causes, symptoms and dietary management.	Arpita Srimani	6
		5. Anaemia: Definition, causes, classification, and dietary management of Nutritional anaemia.	Sohini Roy	4
		6. Hypertension, Atherosclerosis and Diabetes mellitus: Definition, Causes, Types, risk factors, Signs, Symptoms and dietary Management.	Sohini Roy	6
		7. Fever: Definition, causes, types, symptoms and dietary management.	Sohini Roy	4
		<b>Continuous Internal Evaluation(VIVA-VOCE)</b>	Sohini Roy	2
	FNT-G-DSE-B-6-1-P: CLINICAL NUTRITION (PRACTICAL)	1. Planning and preparation of Therapeutic Diets for the following diseases:		
		i) Diabetes mellitus	Sohini Roy	2
		ii) Hepatitis	Arpita Srimani	2
		iii) Hypertension	Sohini Roy	2
iv) Obesity		Arpita Srimani	2	