**ACADEMIC CALENDER**

**Department of Food & Nutrition(H&G)**
**2023 1ST , 3rd, 5thsem ,NEP & CBCS**

| Semester/ Year | Syllabus Module/ Unit | Teachers | Tentative period of completion |
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| 3rd sem H | **FNTACOR05T: NUTRIENTS METABOLISM(THEORY)** | | |
| | **1.Carbohydrate Metabolism: Glycolysis & its regulation. Glycogen metabolism. Metabolism of pyruvate. Outline ofpentose phosphate pathway. Anaplerotic reactions. Importance of gluconeogenesis.** | DP | September - january 23 |
| | **2. Lipid Metabolism : Fatty acid synthase and de novo biosynthesis of fatty acid; regulation and mechanism of chain elongation. Metabolism of cholesterol, its control and pathophysiological importance. β-oxidation of fatty acids.** | DP | |
| | **3. Amino acid Metabolism : Essential amino acids. Transamination. Deamination. Transmethylation. Decarboxylation.glucogenicandketogenicaminoacids.Outlineof urea cycle. Inborn errors of Metabolism.** | DP<br>DP | |
| | **4. Biologicaloxidation Mitochondrial electron transport chain. High energy phosphate bond.Formation of ATP.** | | |
| | **5. Nucleic acid metabolism Chemical structure of purine and pyrimidine, Catabolism and anabolism of pyrimidines. Gout - occurrence, prognosis, progression and therapy.** | DP | |
| | **6.Vitamins Classification, charcateristics and chemical properties of fat and water soluble vitamins. Functions of fat and watersolublevitamins.Hypervitaminosis.Roleofvitamins A,D,C, B1, B2B6, B12 and folic acid inmetabolism.** | DP | |
| | **7.Mineral Metabolism Role of minerals in physiology. Trace elements. Sodium potassium balance. Role of calcium, iron and zinc in human body -metabolism, functions, deficiency and toxicity.** | DP | |

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| | **Internal exam Scripts will be checked by :- DP**<br><br>FNTACOR05P: NUTRIENTS METABOLISM(PRACTICAL)<br><br>TOTAL HOURS: 60 2 CREDITS<br>1. Estimation of Vitamin C in citrus fruits.<br>2. Estimation calcium in blood (using kit) and drinking water (Complexometry).<br>3.Estimationofsodiumandpotassiumi<br>blood(usingkit)<br>.4.Estimationofironinvegetables byspectrophotometry.<br>5.Estimation of DNA(PDAmethod) and RNA(Orcinolmethod in tissues by spectrophotometry.<br><br>INTERNAL PRACTICAL MARKS WILL BE GIVEN BY SMT DEBOSMITA PATHAK | DP | September 23-January 24 |

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| | **FNTACOR06T: NUTRITION THROUGH LIFE SPAN(THEORY)** | | |
| | **1. Basics of Meal Planning Principles of meal planning,Food groupsandFoodexchangelist,Factorsaffectingmealplanningand food relatedbehaviour**<br>**2. Nutrition in Adults and Elderly Physiological changes in elderly..RDAandnutritionalguidelines,nutritionalconcernsand healthyfoodchoicesfor:Adultmanandwoman,Elderly.** | **SS**<br>**Mitali palodhi** | September<br>october |
| | **3. Nutrition during Pregnancy Nutrition During Pregnancy: Factors (non-nutritional) affecting pregnancy outcome, importance of adequate weight gain during pregnancy,antenatal careanditsschedule,Nutritionalrequirementsduringpregnancy andmodificationofexistingdietandsupplementation,Deficiency of nutrients, specially energy, iron folic acid, protein, calcium, iodine. Common problems of pregnancy and theirmanagements, specially - nausea, vomiting, pica, food aversions, pregnancy inducedhypertension,obesity,diabetes.Adolescentpregnancy.** | SS | September October |
| | **4.NutritionduringLactation Nutrition during Lactation: Nutritional requirements during lactation, dietary management, food supplements, galactogogues, preparation for lactation.Care and preparation of nipples during breastfeeding.** | SS | October-November |
| | **5.Nutrition during Infancy Nutrition during Infancy: Infant physiologyrelevanttofeedingandcare,Breastfeeding,colostrum, its composition and importance in feeding, Initiations of breast feeding.Advantagesofexclusivebreastfeeding.Basicprinciplesof breastfeeding.Introductionofsupplementaryfoods,initiationan d management of weaning, Baby-led weaning. Bottle feeding-circumstances under which bottle feeding is to be given. Care & sterilization of bottles. Preparation of formula. Mixed feeding, breast feeding and artificial feeding,Management of pretermand low birth weightbabies.** | SS | December-January |
| | **6. Nutrition for Children and Adolescents Growth and development in children, RDA, nutritionalguidelines, nutritional concernsandhealthyfoodchoicesfor:Preschoolchildren,School children,Adolescents**<br>**INTERNAL SCRIPTS WILL BE CHEKED BY: SS** | Smt Mitali Palodhi | November-january |

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| | FNTACOR06P: NUTRITION THROUGH LIFE SPAN(PRACTICAL) TOTAL HOURS: 60 2 CREDITS Meal planning and preparation of adequate meal for different age groups with special reference to different physiological conditions: infants, pre-schooler, school children, adolescents, adults, pregnancy, lactation and elderly.<br>**INTERNAL PRACTICAL MARKS WILL BE GIVEN BY: SP AND SS**<br>**FNTACOR07T: ELEMENTARY DIETETICS AND MENU PLANNING (THEORY)** | MS &GC | **September-December** |
| | **1. DieteticsandDietician Definition and objective of dietetics, Dieticians-Definition, Classification andResponsibility** | Mitali palodhi | **OCTOBER** |
| | **2.Foodgroups Four food groups (Caribbean Food Guide; Canadian Food Guide; USA Food Pyramid; British Food Guide; Recommended Nutrient Intake (RNI); Dietary Value Intake; Dietary Reference Value, Five food group system of ICMR. Structure and composition of cereals. Wheat- structure and composition, types (hard, soft/ strong, weak) ,Diagrammatic representation of longitudinal structure of wheat grain. Malting, gelatinization of starch, types of browning- Maillard&caramelization. Rice- structure and composition, parboiling of rice- advantages and disadvantages. Structure and composition of pulses, toxic constituents in pulses, Milk andMilk Products-composition, classification and processing, Eggs- com[position, Meat, fish & poultry- Types, composition, Sugar& Sugar products-Types and composition, Fats & Oils-Types & sources, Food adjuncts- spices, condiments, herbs, extracts;concentratesessences,foodcolours,origin,classification, convenience foods, Bevarages-Tea, Coffee, Chocolate , cocoa poeder-composition** | Mitali Palodhi | **October-january 24** |
| | **3.Dietaryguidelines Nutritive values as a basis for classificationof food, Recommended Daily Allowances (RDA), Dietary guidelines for Indians and foodpyramids.** | GC | September |

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| | **4.MenuPlanning Menu Planning: Rationale for menu planning, Factors affecting food choice, Nutritional factors,other factors; Exchange list and food composition tables for menu planning, Steps in the development of exchange list, Factors tobe considered when planning the regular balanced diet: adequacy, balance caloric control, moderation, variety andaesthetics.** | GC | **October** |

**Academic Calendar**

**Department of Food&Nutrition(Honours)**

**2023 1ST ,3rd , 5th sem , NEP & CBCS**

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| | **5. Basics ofdiettherapy Basic concepts of diet therapy: Therapeutic adaptations of normal diet, principles and classification of the therapeutic diets, Nutrientmodifications.** | GC | **November** |
| | **6. Diet forhealth care Team approach to health care. Assessment of Patient'sneeds.** | GC | December |
| | **7. RoutineHospitalDiet Routine Hospital Diets: Regular,light, soft, fluid, parenteral and enteral feeding.** | GC | november |
| | **INTERNAL SCRIPTS WILL BE CHEKED BY: GC** | | |
| | FNTACOR07P: ELEMENTARY DIETETICS AND MENU PLANNING (PRACTICAL) TOTAL HOURS: 60 4 CREDITS<br>1. Planning and preparation of norma ldiets. GC<br>2. Planning and preparation of different liquid diets. SS<br>3. Planning and preparation of different soft/semi solid diets. SS<br>4. Planning and preparation of different nutrient modified diet. GC | SS&GC | September-december |
| | **INTERNAL PRACTICAL MARKS WILL BE GIVEN BY :- SS** | | |
| | **SEC SYLLABUS** | | |
| | **FNTSSEC01M: INSTRUMENTATION**<br>**1.Microscopy Brightfield and darkfield microscopy, Optical Microscopy, Phase contrast Microscopy, Inverted Microscopy** | MS | September |
| | **2. Chromatography Principles and applications of paper chromatography (including Descending and 2-D), Thin layer chromatography, HPLC. Separation of mixtures by paper / thin layer chromatography** | DP | October |
| | **3. Spectrophotometry Principle and use of study of absorption spectra of biomolecules, Analysis of biomolecules using UV and visible range, Colorimetry. Protein concentration of spectrophotometer/ colorimeter.** | DP | November |
| | **4. Electrophoresis Principle and applications of native polyacrylamide gel electrophoresis** | DP | December |
| | **5.Centrifugation Preparative and analytical centrifugation, densitygradientcentrifugationandultracentrifugationSeparation** | GC | October |

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| | **of components of a given mixture using a laboratory scale centrifuge** | | |
| | **6. ECG and EEG Principles of ECG and EEG, application of ECG and EEG** | MS | **November** |
| | **7. ELISA Principle and applications of ELISA test** | SS | October |
| | **INTERNAL SCRIPTS WILL BE CHEKED BY: SS** | | |
| | **3RD SEM G (DSC)**<br>**FNTGCOR03T: COMMUNITY, NUTRITION AND HEALTH ASSESSMENT (THEORY)**<br>**1. Concept on Community Concept and types of Community. Concept of community nutrition, Community health, Factors affecting community health.** | **MS** | Sep-October |
| | **2. Nutritional AssessmentNutritional Assessment: Meaning, need, objectives and importance. Method of assessment of nutritional status – Anthropometry, Clinical, Biochemical, Dietary surveys, Vital healthstatistics.** | SS | **September-october** |
| | **3. Concept of surveillance system 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.** | MS | October |
| | **4. Nutrition InterventionProgrammes Current National Nutrition Intervention Programmes in India- SNP, ANP, Midday meal,**<br>**NIDDCP, NPPNB, NNAPP. ICDS,** | SS | November |
| | **5. Nutrition Education Nutrition Education: Definition, objectives of nutrition education. Methods of imparting nutrition education.**<br>**INTERNAL SCRIPTS WILL BE CHEKED BY: MS** | SS | December |
| | FNTGCOR03P: COMMUNITY, NUTRITION AND HEALTH ASSESSMENT(PRACTICAL) TOTAL HOURS: 60CREDITS:<br>2 1. Anthropometric Measurement of infant - Height, | SS | October - November |

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| | weight, circumference of chest, mid - upper arm circumference. Calculation of BMI.<br>2. Clinical assessment and signs of nutrientde□ciencies.<br>3. Diet survey by 24 hours recallmethod.<br>4. Preparation of homemade ORS. 5. Preparation of low cost and medium cost schooltif□n.<br><br>**INTERNAL PRACTICAL MARKS WILL BE GIVEN BY : SS**<br><br>**5TH SEM H**<br>**FNTACOR11T: CLINICAL NUTRITION AND DIET FOR SPECIAL SITUATIONS IN LIFE (THEORY)** | | |
| | **1. Nutritional management of physiological stress Nutrition in wound healing, Surgery: Pre and post surgical dietary management, Burns, Classification, Complication, Dietary management, Trauma: Dietary management, Sepsis: Dietary management.** | MP | October |
| | **2. Dietary Modification in febrile Condition Acute, chronic and recurrent fevers, typhoid, rheumatic fever, tuberculosis, malaria, H1N1, dengue fever and chikunguinea.** | **MS** | Sep-oct |
| | **3. Nutritional management of GI diseases Diseases of Esophagus and stomach: Esophagitis(GERD), Dyspepsia, Peptic ulcer, Gastritis, Gastrectomy, Dumping syndrome . Intestinal diseases: Flatulence, Diarrhea, Constipation, Hemorrhoids, Diverticular disease, Duodenal ulcer, Inflammatory Diseases of Bowl: Crohn's disease and ulcerative colitis, IrritablebowlSyndrome, Colostomy,Ileostomy** | MP | October-November |
| | **4.Malabsorption syndrome Celiac disease (Tropical sprue),Steatorrhoea, Intestinal Brush border diseases,Protein losing enteropathy** | MS | Oct-nov |
| | **5. Diseases of Gall bladder andpancreas Pathophysiologic changes, etiology and dietary management -(Biliary dyskinesia , Cholelithiasis, Cholecystitis, Cholecystectomy ,Pancreatitis)** | SS | Nov-dec |
| | **6. Liver diseases Pathophysiology,Progression of liver disease, Role of specific nutrients and alcohol in liver diseases. Nutritional care in liver disease in the context of results of specific liver function tests, Viral hepatitis , cirrhosis of Liver, Hepatic encephalopathy, Wilsons disease.** | SS | Sep-nov |

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| | **7. Nutrition Management of Renal Disease Etiology and pathogenesis, Clinical and metabolic manifestations Diagnostic tests, Acute and chronic nephritis, Nephrotic syndrome, Renal Failure: Acute and chronic, Nnephroletheasis,ESRD** | MP | Nov- dec |
| | **8. Nutritional management in Allergy Definition, symptoms mechanism of food allergy, Biochemical and immune testing (short), Elimination diets, Food selection, Food allergy in infancy: Milk sensitive enteropathy, intolerance to breast milk, Prevention of food allergy.** | **MS** | September |
| | **9.Neurological diseases Alzheimer's, Parkinson's disease and Epilepsy, Anorexia nervosa andbulimia.** | MP | Dec- jan |
| | **INTERNAL SCRIPTS WILL BE CHEKED BY: MS** | | |
| | FNTACOR11P: CLINICAL NUTRITION ANDDIET FOR SPECIAL SITUATIONS IN LIFE(PRACTICAL) TOTAL HOURS: 60 2 CREDITS<br>Planning and preparation of Diets for the following diseases: i) Pepticulcer ii) Viralhepatitis (GC)<br><br>iii) Fever iv)Acute and chronic renal failure (MS)<br>**INTERNAL PRACTICAL MARKS WILL BE GIVEN BY : GC & MS** | GC & MS | September December |
| | **FNTACOR12T: FOOD MICROBIOLOGY AND IMMUNOLOGY(THEORY)** | | |
| | **1.General Introductiontomicrobes(Bacteria, Fungus, and Algae) Classification, Nomenclature and Morphology (external and internal features). Principles of staining.** | DP | October |
| | **2. Growth kinetics of bacteria Growth kinetics, Factors affecting growth, different nutritional media for growth, methods of media sterilization.** | DP | November |
| | **3. Microbiology of food Microbes commonly present in food and the diseases caused by them, microflora present in milk, cereals, vegetables, flesh food. Seafood and Shell fish poisoning. Mycotoxins, Foodborne Diseases, Prions.** | DP | December |
| | **4.Microbial Food Spoilage Sources of Microorganisms infoods, Someimportantfoodspoilagemicroorganisms,Spoilageofspecific food groups - Milk and dairy products, Meat, poultryand** | SS | October |

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| | **seafoods, Cereal and cereal products, Fruits and vegetables and Canned products.**<br>**5.FoodFermentations Fermentation –definition and types, Microorganisms used in food fermentations, Dairy Fermentations starter cultures and their types , concept of probiotics, Fermentated Foods-types, methods of manufacture for vinegar, sauerkraut, tempeh, miso , soya sauce, beer, wine and traditional Indian foods.** | SS | November |
| | **6.Immunesystem Cells & Organs of the immune system, Innate and Acquired, Primary and secondary immune response, Active and Passive, Antigen, Antibody, Haptens, Adjuvants, Immunoglobulin- classification, polyclonal and monoclonal, basic structure and function, antigen and antibody reactions-RIA, ELISA, Immunoblot. Antibody production -processing and presentation of antigen, MHC, Humoral immune response. Cell mediated immunity, Formation, maturation and activation of B and T cells, Immune effectors system- cytokines complement system, K cells and NK cells, Cell mediated effectors response, Interferons, Immunopathology - basic principles of auto immune disease , Vaccine, toxins, toxoids, antiserum. Basic principles of immunological detection of pregnancy and immunohistochemistry.**<br><br>**INTERNAL SCRIPTS WILL BE CHEKED BY: DP** | EXTENSION LECTURE | Oct-November |
| | FNTACOR12P: FOOD MICROBIOLOGY AND IMMUNOLOGY (PRACTICAL) TOTAL HOURS: 60 4<br>CREDITS 1. Introduction to microbiology: Use of equipments Understanding and use of compound microscope Use of Autoclave Use of Incubator and Inoculation chamber 2. Preparation of different types of media (complex, differential and selective) 3. Preparation of slant, stab and plates using nutrient agar 4. Morphological study of bacteria and fungi using permanent slides 5. Gram staining 6. Bacteriological Analysis of Water by MPN method 7. Ouchterlony double diffusion test in agar-gel.<br>**INTERNAL PRACTICAL MARKS WILL BE GIVEN BY : DP** | DP | September-December |
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| 5th Semester DSE FOR FNTAHONS | **FNTADSE02T: ENTREPRENEURSHIP IN FOOD INDUSTRY (THEORY)**<br><br>**1.Entrepreneurial Development CASE STUDIES of SUCCESSFUl entrepreneurs,**<br><br>**EXERCISES on ways of SENSING opportunities–SOURCES of idea, creating efforts,SWOT49 Analysis,Entrepreneurial SKILL ASESSMENTTEST,** | PS COMMERCE | September -December |

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| | **Techniques of development of entrepreneurial skills,positive selfimage and locus of control.**<br><br>**2.Food Business management and studies of Food Processing Business and its aspects,Business opportunity Identification and Assessment techniques,Business Idea Generationan devaluation exercise, Market Assessment study Analysis of competitive situation,**<br><br>**SWOT Analysis for business and for competitors,Preparation of business plan,Preparation of projectreport, Methods of Arrangement of inputs– finance and material, Tax planning.**<br><br>**3.Personality development and communication skills No.ofHours20 CommunicationskillsandPersonalityDevelopment,IntrapersonalcommunicationandBodyLanguage,InterpersonalCommunicationand Relationships,LeadershipSkills,TeamBuildingandpublicspeaking, CorporateGrooming,DressingEtique†e,PreparingforInterview, EmotionalQuotient.**<br>**INTERNAL SCRIPTS WILL BE CHEKED BY: PS COMMERCE**<br><br>FNTADSE02P: ENTREPRENEURSHIP IN FOOD INDUSTRY(PRACTICAL) TOTAL HOURS: 60 CREDITS: 2 1. Preparation of business plan. 2. Preparation of project report. 3. Tax Planning under the head Salary. 4. Visit to a food industry<br>**INTERNAL PRACTICAL MARKS :- POULAMI SINHA COMMERCE** | PS<br><br>PS COMMERCE | September-December<br><br>Do<br><br>Do<br><br>September-December |

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| | **FNTADSE03T: FOOD BORNE DISEASES AND FOOD TOXICOLOGY(THEORY)** | | |
| | **1. Food borne DISEASES Definition related to food borne DISEASES, types of DISEASES with example (Pandemic, Endemic and Epidemic). Infection, contamination, decontamination, DISINFECTION, transmission (direct and indirect). Brief idea about different vector borne DISEASES, mode of TRANSMISSION prevention and control of following DISEASES: Salmonella, Shigella,Typhoid,Botulism,Cholera,E.colifoodpoisoning,Staphyloc occal food POISONING, Clostridium infection, Bacillaryinfection.** | MS | September -Oct |
| | **2. Lactose intolerance Lactose intolerance-ITS mechanism and enzyme deficiency.** | MS | October |
| | **3. Mechanism of foodborne DISEASES Molecular mechanism of foodborne DISEASES.** | E Lec | November |
| | **4. Food SAFETY Definition: Food SAFETY, TYPES of hazards (Biological, chemical and PHYSICAL HAZARDS), impact on health, control measures, factors affecting foodsafety.** | MS | November |
| | **5. Hygiene and SANITATION Hygiene and SANITATION:Contamination, control methodsusing physical and chemical agents, USE of preservatives, pest control management, personalhygiene.** | GC | September - November |
| | **6. Food safety management Food safety management:Concept of SAFETY management,prerequisites-GHPs,GMP,HACCPetc.** | GC | |
| | **7.Toxicagents in food Toxicagents infood:Botulism,lathyrism, Ciguatoxins,Tetrodotoxins,Saxotoxins,conotoxins,Antivita mins, Haemagglutins,Cyanogenicglycosides,Strychnine,Solanine,atropine , Muscarine.** | GC | December |

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| | **INTERNAL SCRIPTS WILL BE CHEKED BY: GC** | | |
| | FNTADSE03P:FOODBORNE DISEASES AND FOOD TOXICOLOGY (PRACTICAL) TOTAL HOURS: 60 CREDITS: 2 1. Assessment of surface sanitation by swab and rinse method. 2. Assessment of personal hygiene. 3. Designing of various food processing systems and food service areas. 4. Design and layout of cold storage and ware house. 5. Assessment of physico chemical properties of waste water. 6. Isolation and enumeration of bacteria from rottenfoodbreadandvegetables.7.Testingofsanitizersanddisinfectants. 8. Study of phenol coefficient of sanitizers. 9. Visit to Food industry and preparation of report. | DP | September-December |
| | **INTERNAL PRACTICAL MARKS WILL BE GIVEN BY :- DP** | | |
| | **5TH SEM G (DSE 1 SYLLABUS FOR FNTG [ONLY FOR DSC])** | | |
| | **FNTGDSE02T- FOOD SAFETY AND FOOD PROCESSING** | | |
| | **1.Food additive and food SAFety:Concept offood SAFety,factors affecting food safety,Food additiveS-variouS typE sand their effectS on health.** | SS | Oct - December |
| | **2.FoodSPOilage:Cereals,PULSES,VegetableS&FruitS,Milk&milk produCTS,FLESHyfoods,Fats&OILS.Food borne infectionS & infEstation.** | SS | |
| | **3.Food adulterantsPFA definition of food adulteration ,Common adulterANTS in food and their effectS on health, Common houSEHold methoDS to detect adulteranTS in food.** | SS | |
| | **4.Food laws and regulatory authority No.ofHours10Prevention of Food Adulteration(PFA)Act,Regulating authority-Codex Alimentarius,ISI, Agmark,Fruit ProduCTS Order(FPO),Meat Products Order(MPO),Bureau of Indian StanDARDS(BIS), MMPO, FSSAI.** | SS : | |
| | **5.Food PreSERvation No.ofHours10 Food PreSERvation–Definition, Objectives,MethoDS–mainprinciple,procedure,commonexaMPLES** | SS | |
| | **6.Food adjunctS and preSERVED productS No.ofHours8 Spices(Chilies, Turmeric,GarlicandGinger),useandnutritionalaspect.JAMS,Jellies, SquaSHES–USES and nutritional ASPECTS.** | SS | |
| | **INTERNAL SCRIPTS WILL BE CHEKED BY: SS** | | |
| | FNTGDSE02P- FOOD SAFETY AND FOOD PROCESSING(PRACTICAL) TOTAL HOURS: 60 CREDITS: 2 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) | SS | Oct-dec |

**Academic Calendar**
**Department of Food & Nutrition(Honours)**
**2023 1ST ,3rd , 5th sem , CBCS**

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| | Artificially foreign matter in tea (dust/leaves). 2. Prepa ration of Jam, Jelly, Pickle and Sauce<br><br>**INTERNAL PRACTICAL MARKS WILL BE GIVEN BY :- SS** | | |
| **1ST SEMESTER (NEP) MAJOR** | CORE COURSE (DS) FNTADS01T BASICS OF FOOD & NUTRITION<br>1.Introduction to Food and Nutrition Foods:Energygiving, bodybuildingandprotective.Nutrients:macroandmicronutrients,Dieta nd balanceddiet,Menu.Healthandnutritionalstatus.Malnutrition,functio nal food, prebiotics, probiotics, 8 phytochemicals, nutraceuticals. Fibre. Functions of foods: physiological, psychological, social. Food groups,food pyramid,Relationbetweenfoodandnutrition,healthanddiseases. | **SS** | August-November |
| | 2. Foods, Nutrients and cooking of food Foods and their nutrientcontents:Nutrientspresentincerealsandmillets,pulses,nutsan d oil seeds, fruits and vegetables, milk and milk products, flesh food, eggs, Condiment and spices, salt. Nonnutrient components of foods: phytate, tannins,oxalate,trypsininhibitor,goitrogensandothertoxicagentsinfoo d. Cooking: Beneficial and adverse effects of cooking. Different methods of cooking-dry, moist, frying, and micro wave cooking-advantage, disadvantageandtheeffectofvariousmethodsofcookingonfoods,Solar cooking. | GC | August-November |
| | 3.Food energy and energy requirementsTheenergyvalue of foods: Physical and physiological calories. Bomb calorimeter Energy requirement of an individual: Basal metabolic rate (BMR) and physical activity..BMR:Measurement(directandindirect),factorsaffectingBMR, SDAoffoods.physicalactivityratio(PAR).Classificationofactivitiesbased on occupations.Nutritional requirements and Recommended dietary allowances(RDA):factorsaffectingRDA,ApplicationofRDA,Referencem an andwoman..<br>**INTERNAL SCRIPTS WILL BE CHEKED BY: MS** | **MS** | August-November |

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| | DS FNTADS01P BASICS OF FOOD AND NUTRITION PRACTICAL<br>CREDITS 1. Process involved in cooking, microwave, steaming, grilling, deep fat frying.<br><br>2.Generalconceptsofweightsandmeasures,Eyeestimationofrawcooked foods<br><br>3. Preparation of food from different food groups and their significance in relation to health<br><br>4. Preparation of supplementary food from different age group and their nutritional significance<br><br>**INTERNAL PRACTICAL MARKS :- SS** | SS& GC | August-November |
| | **FNTASE01: Fundamental Skills of Computer and Instrumentation**<br>• Proficiency in use of commonly available widely used packages related word processing, presentation, email and working knowledge in spreadsheet packages<br>• Preparation of reports, creation of tables, graphs as especially appropriate for food and nutrition<br>• Preparation of suitable aids for the purpose of communication and demonstration of food and nutrition related issues especially focussing the common people<br>• Preparation of self-profile<br>• Use of microscopy<br><br>Project submission , Examiner GC | SS DP GC MS | August - december |

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| | **Food and Nutrition Minor** | | |
| | **CORE COURSE (DS) FNTGMA01T: Elementary Food and Nutrition** | | |
| | 1. **Introduction to Food and Nutrition** Definition of Food, Nutrition, Nutrient, Dietetics, Balance diet,Malnutrition, Energy, BMR | SS &GC | August-sep |
| | 2. **Food and Nutrients** Carbohydrate, Protein, Fat, Vitamins and Minerals (calcium, phosphorus, sodium, potassium, iron, iodine,) - sources, classification, chemistry, functions, deficiencies of these nutrients. Functions of water and dietary fibre. | MS | August- oct |
| | 3. **Food groups** Basic food groups: Types, composition, nutritional significance, role of cookery of cereals, pulses, milk and milk products, meat, fish, egg, vegetables and fruits, nuts, oil and sugar. | SS | August -Nov |
| | 4.**Deficiency Diseases**: Elementary idea about deficiency diseases related to food and nutrition | GC | August- nov |
| | **PRACTICAL**<br>1. Elementary idea of weights and measures. SS<br>2. Preparation of dishes from different food groups. MS<br>3. Planning and preparation of diet for an adult female and male. SS | | Sep- Nov |

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**Academic Calendar**
**Department of Food & Nutrition(Honours)**
**2023 1ST ,3rd , 5th sem , CBCS**

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**Academic Calendar**
**Department of Food & Nutrition(Honours)**
**2023 1ST ,3rd , 5th sem , CBCS**

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