REVISED SYLLABI
(Effective from the academic year 2009-2010 onwards)

B. Sc. NUTRITION AND DIETETICS

Department of Nutrition and Dietetics
Achariya College of Arts and Science, Villianur.
(Affiliated to Pondicherry University)
SEMESTER – I

NAD101: FOOD SCIENCE -1

UNIT I: INTRODUCTION TO FOODS  
Definition, functions, food groups, classification of foods. Study of different cooking methods, merits and demerits, Solar cooking, Microwave cooking. Cereals - Cereals and millets- breakfast cereals, cereal products, fast foods- structure, processing, use in variety of preparation, selection, variety, storage, nutritional aspects and cost.

UNIT II: PULSES  
Pulses and legumes- Production (in brief), Selection and variety, storage, processing, use in variety of preparation, nutritional aspects and cost. Highlighting soya beans, lathyrism- removal of toxins.

UNIT III: MILK AND MILK PRODUCTS  
Composition, classification, quality, processing, coagulation of milk, digestion of milk, storage, uses and cost. Nutritional aspects of milk, curd, butter, paneer, khoa, cheese, ice cream, kulfi and various kinds of processed milk.

UNIT IV: EGG, FISH, POULTRY AND MEAT  
Selection, quality, purchase, storage, uses and nutritional aspects. Spoilage of egg, fish, poultry and meat.

UNIT V: VEGETABLES AND FRUITS  
Variety, selection, purchase, storage, availability, cost, use and nutritional aspects of raw and processed vegetables and fruits. Effects of cooking on colour, texture, flavour, appearance and nutritive value.
TEXT BOOKS


REFERENCE BOOKS


1. Familiarisation with different stoves, ovens and simple kitchen equipment.


3. Cereal cookery
   a. Methods of combining flour with liquid eg. Powdered cereal coarse (e.g. Phirnee, broken wheat uppuma) and fine (e.g. Ragi porridge, wheat halwa).
   d. Wheat and ragi preparations – Kesari, poori, paratha, bhathura, naan, ragi puttu, ragi leaf cake, ragi adai.

4. Pulse Cookery
   b. Pulse Preparations – brinjal sambar, sprouted green gram patchadi, cow peas sundal, adai, tomato dhal maseel, ven pongal, ompodi, sugian, freen gram payasam, masala vadai and chole.

5. Vegetable Cookery
   b. Vegetable preparations – potato methi curry, mashed potatoes, aloo tikke, vegetable kurma, avail, keerai maseel, cabbage pugath, carrot cucumber, ridge gourd and green gram dhal kootu, tomato chutney and carrot halwa.

6. Fruits
   Different ways of serving oranges, stuffed dates, banana fritters, fruit salad, stewed apricots, banana with custard, fruit jelly, grape jam, fruit punch, baked apple and pine apple upside down cake.
UNIT I: INTRODUCTION TO NUTRITION 7 hours

UNIT II: ENERGY AND CARBOHYDRATES 9 hours

UNIT III: PROTIENS 8 hours
Definition, classification and functions. Assessment of protein quality (BV, PER, NPU), Digestion and Absorption, factors affecting protein bio-availability including anti-nutritional factors. Requirements, deficiency.

UNIT IV: LIPIDS 8 hours
Definition, classification and functions of lipids. Digestion and absorption, Intestinal re-synthesis of triglycerides. Types of fatty acids, role and nutritional significance (SFA,MUFA,PUFA, omega-3).

UNIT V: MINERALS, TRACE ELEMENTS AND VITAMINS 8 hours
Minerals - Physiological role, bio-availability and requirements, sources, Deficiency and Excess(Calcium, Phosphorus, Magnesium, Iron, Fluoride, Zinc, Iodine) Vitamins-Physiological role, Bio-availability and requirements, sources, deficiency and excess(Fat soluble and water soluble)
TEXT BOOKS


REFERENCE BOOKS


1. Estimation of calorific value of food.
2. Estimation of moisture content.
3. Estimation of ash content.
4. Preparation of buffers (acidic, neutral and alkaline) and determination of pH.
5. Qualitative identification of carbohydrates – glucose, fructose, galactose, sucrose, maltose, lactose.
7. Qualitative identification of amino acids – histidine, tyrosine, tryptophan, cysteine, arginine.
9. Qualitative tests for minerals.
UNIT – I: CELL AND TISSUES


UNIT – II: DIGESTIVE SYSTEM

Accessory organs of digestion – Structure and functions – Teeth, Tongue, Salivary glands; Saliva – Composition and functions. Organs of Digestion – Oesophagus, Stomach, Small intestine and Large intestine – Structure and functions, Movements of the digestive system. Associated organs of digestion – Liver, Gall bladder, Pancreas (Digestive function) and Spleen. Disorders and Diseases – anorexia, Achlorhydria, Peptic ulcer, gastric ulcer and duodenal ulcer, gastritis, typhoid, jaundice.

UNIT- III: CIRCULATORY SYSTEM


UNIT–IV: EXCRETORY SYSTEM


UNIT-V: RESPIRATORY SYSTEM

TEXTBOOKS


REFERENCES


1. Microscopic study of different tissues - Epithelial, connective, muscular & nervous tissues
2. Microscopic study of digestive organs - Pancreas, stomach, small intestine, liver
3. Microscopic study of respiratory organs - Lung, trachea
4. Microscopic study of excretory system - Kidney, nephron
5. Blood Grouping
6. Microscopic examination of prepared slides - Fresh mount of blood and stained blood smear
7. Estimation of Haemoglobin by Sahli’s Method
UNIT I: SUGAR AND SUGAR COOKERY  
Different forms of sugar (sugar, jaggery, honey syrup) manufactures, selection, storage and use as preservatives. Stages of sugar cooking.

UNIT II: FATS AND OILS  
Types of fats and oils (animal and vegetable), processing and changes (hydrogenation, rancidity, smoking point, emulsification), uses, storage, cost and nutritional aspects. Nuts and oilseeds: Nutritive value and toxins.

UNIT III: RAISING AGENTS AND FOOD ADJUNCTS  
Raising agents - Types, constituents, uses in cookery and bakery, different types of cakes- sponge, chiffon and shortened cakes. Food Adjuncts - Spices, condiments, herbs, extracts, concentrates, essences and food colours- origin, classification, description uses, specification, procurement and storage.

UNIT IV: CONVENIENCE FOODS  
Role, types, advantages, uses, cost and contribution to diet.

UNIT V: TEA, COFFEE, CHOCOLATE & COCOA  
Cultivation, processing, cost and nutritional aspects.
TEXT BOOKS


REFERENCE BOOKS


1. Eggs
   a. Factors affecting whipping of egg white eg. Salt, Sugar, vinegar, fat and milk, temperature, type of container used and beaters.
   b. Poaching of eggs.
   c. Boiling of eggs.
   d. Coagulation of egg proteins – stirred and baked custards.
   e. Egg preparations – egg curry, spicy omelet, puffy omelet and French omelet, caramel custard (steamed), kalkadai muttai, Scrambled eggs and fried eggs.

2. Milk And Milk Products
   b. Preparation of cream of tomato soup.
   c. Milk preparations – Punjabi milk curry, vanilla ice cream, banana milk shake, vermicelli payasam, cucumber patchadi, thayir vadai, morkolumnbu and baked macaroni and cheese.

3. Beverages
   a. Preparation of coffee using coffee filter, steeping, coffee maker and instant coffee powder.
   b. Preparation of tea using steeping, tea bags, instant tea and green tea.
   c. Preparation of cocoa.

4. Fats and oils
   a. Smoking Point – break cube test
   b. Frying poories at different temperatures.
   c. Frying kal-kals at different temperatures.
   d. Preparation of mayonnaise.

5. Sugar cookery
   a. Stages of sugar cookery.
   b. Preparations – vanilla fondant, chocolate fudge, coconut ice, gulab jamun, Mysore pak, gouja and marshmallow.

6. Raising agents.
   Sponge, chiffon and shortened cakes.

7. Preparation of different convenience foods.
   Two recipes using condensed milk, cake mix, vadai mix, gulab jamun mix, sambhar/rasam mix, rava idli, dosai mix, pongal mix, custard mix, jelly mix and noodles.
UNIT I: BASIC PRINCIPLES OF MEAL AND MENU PLANNING  
Factors to be considered in meal/menu planning.

UNIT II: NUTRITION IN PREGNANCY AND LACTATION  
Pregnancy - Physiological stages of pregnancy, nutrition requirements food selection and Complications of pregnancy. 
Lactation - Physiology of lactation, nutritional requirements.

UNIT III: NUTRITION DURING INFANCY AND EARLY CHILDHOOD  
Infancy - Growth and development, nutritional requirements, breast feeding, infant formula. Introduction of supplementary foods. 
Early childhood. (Toddlers and Preschoolers) - Growth and nutrient needs, nutritional related problems, Feeding Pattern.

UNIT IV: NUTRITION FOR SCHOOL CHILDREN AND ADOLESCENCE  
School children - Nutritional requirements, Importance of snacks, school lunch. 
Adolescence - Growth, Nutrient needs, food choice, eating habits, factors influencing.

UNIT V: GERIATIC NUTRITION  
Factors affecting food intake and nutrients use, nutrient needs, nutrition related problems.


REFERENCE BOOKS


1. Planning diet for adult men and women, during different activities - sedentary, moderate, heavy worker - preparation of above diets.

2. Planning and preparation of balanced diet for a pregnant woman.

3. Planning and preparation of balanced diet for a nursing mother.

4. Supplementary feeding - Preparation of weaning foods,
5. Planning and preparation of diet for toddler and pre school child

6. Planning and preparation of meals/packed lunch

7. Nutrition during adolescence - Preparation of meals

8. Planning a diet for senior citizen - Preparation of meals

9. Planning meals for middle income family - important consideration in planning meals.
UNIT – I: NERVOUS SYSTEM

Central nervous system - Brain and spinal cord – structure and function. Cerebrospinal fluid. Peripheral nervous system - cranial and spinal nerves.

UNIT – II: SENSE ORGANS


UNIT – III: ENDOCRINE SYSTEM

Hormones – Endocrine glands - Pituitary, Thyroid, Parathyroid, Pancreas (endocrine function), Adrenal – Their structure and functions. Hormones of reproduction. Disorders of over and under secretion.

UNIT – IV: REPRODUCTIVE SYSTEM


UNIT – V: MUSCULOSKELETAL SYSTEM

TEXTBOOKS


REFERENCES


1. Blood count - red blood corpuscles count
2. Blood count - white blood corpuscles count
3. Determination of coagulation time.
5. Recording blood pressure using sphygmomanometer, effect of exercise on pulse rate, and blood pressure.
6. Microscopic structure of various glands – Thyroid, pituitary, adrenal
7. Microscopic structure of reproductive organs – Ovary, uterus, mammary gland, testis
SEMESTER III
NAD201: FOOD SERVICE MANAGEMENT

UNIT I: FOOD SERVICE INDUSTRY  

UNIT II: FOOD SERVICE STYLES  
Conventional, Commissary, assembly-line, table service, hatch and counter, cafeteria, banquet, buffet, Indian, western and oriented services.

UNIT III: PLANT LAYOUT, HYGIENE AND SANITATION  
Layout of food service units – planning of areas as work units with relevant spacing. Equipment – major and minor – their selection, layout, use and care. Fuels. Hygiene and Sanitation - In food handling, plant, equipment, personnel, raw materials, and methods of work.

UNIT IV: ORGANISATION AND MANAGEMENT  

UNIT V: FINANCIAL MANAGEMENT  
Cost control – food costs, overheads and profits. Budgeting, books of account, inventories. Stores control, indents, Purchase.
TEXT BOOKS


REFERENCE BOOKS


NAD201: FOOD SERVICE MANAGEMENT PRACTICALS

1. Visits to well organised food services attached to Hostel, Hotel / Restaurant, Industry, Hospital Dietary Department, Transport Catering.

2. Preparation and service of 4 dishes comparison of traditional, ready – mix commercial preparations with regard to time, labour cost and nutritive value.

3. Quantity Cookery
   Planning and preparation in 25 portions- 4 Indian, 2 Western and 1 Oriental menus.
   Quantity preparation of snacks.

4. Internship training in hotels/restaurants for 30 days.
UNIT I: CONCEPT AND SCOPE OF COMMUNITY NUTRITION
Nutritional Status of a community
Methods and techniques used to determine the Nutritional status of a community

UNIT II: NUTRITIONAL PROBLEMS OF THE COMMUNITY

UNIT III: SCHEMES AND PROGRAMMES TO COMBAT NUTRITIONAL PROBLEMS IN INDIA
Prophylaxis programmes
Midday meal programme
ICDS

UNIT IV: HAZARDS TO COMMUNITY HEALTH AND NUTRITIONAL STATUS
Adulteration in food
Pollution of water
Industrial effluents, sewage
Pesticide residues in food

UNIT V: NUTRITION EDUCATION
Scope, Objective, Methods available and evaluation. Nutrition policy in India and plan of action
TEXT BOOKS

1. Agarval, A.N.1981: Indian Economy problems of development and planning

REFERENCE BOOKS

UNIT - I: INTRODUCTION TO MICROBIOLOGY

Brief history of microbiology - Louis Pasteur, Robert Koch, Edward Jenner. Pure culture techniques and maintenance of cultures.

UNIT - II: MORPHOLOGY OF MICROORGANISMS


UNIT - III: MICROBIOLOGY OF DIFFERENT FOODS

Sources of contamination and spoilage of: Cereal and cereal products like bread, flour and bakery products; Sugar and sugar products like honey, maple syrup and candies; Vegetables and fruits; Meat products like sausage, bacon and ham, fish, egg and poultry; Milk and its products; Canned foods. Food poisoning and food borne infection.

UNIT - IV: CONTROL OF MICROORGANISMS


UNIT - V: FOOD HYGIENE AND SANITATION

Importance of food hygiene and sanitation with relevance to food industry. General principles of food hygiene in rural and urban areas in relation to food preparation, processing, packaging, storage and transport and personal hygiene. Hygiene and sanitation with relevance to the physical structures of the site and building.
TEXTBOOKS


REFERENCES


NAD205: PRACTICAL – III

FOOD MICROBIOLOGY

1. Microscopic identification of microorganisms (prepared slides).
2. Preparation of culture media and sterilization techniques.
3. Isolation of pure culture – Streak plate method, Serial dilution method.
5. Staining of bacteria – simple staining using Methyl violet, methylene blue, carbol fuschion.
6. Staining of Bacteria- gram staining.
7. Microbiology of air.
8. Microbiology of water.
10. Microbiological analysis of processed food.
11. Microbiological analysis of unprocessed food.
NAD204: NUTRITIONAL BIOCHEMISTRY

UNIT I: BIOLOGICAL OXIDATION 7 hours
Oxidant, reductant, Theories on Biological Oxidative phosphorylation, High-energy phosphates, Myokinase reaction. Enzymes – Definition, types and classification of enzymes, definition and types of coenzymes,

UNIT II: MOLECULAR ASPECTS OF TRANSPORT 6 hours
Passive diffusion, facilitated diffusion, active transport, coupling reaction.

UNIT III: CARBOHYDRATES 10 hours

UNIT IV: LIPIDS 9 hours
Types and properties of Fatty acids, composition and properties of fats, significance of acid value, Iodine value and Saponification value. Classification and structure of phospholipids, structure of glycolipids, types and structure of sterols. Lipoproteins – Types, composition, role and significance in diseases. Metabolism – Beta Oxidation of fatty acids, Cholesterol, Phospholipid synthesis.

UNIT V: PROTEINS 8 hours
TEXT BOOKS


REFERENCE BOOKS


NAD206: PRACTICAL IV

FOOD ANALYSIS

1. Preparation of starch from potato.
2. Determination of acid number in edible oil.
3. Determination of iodine number in edible oil.
4. Determination of saponification number in edible oil.
6. Estimation of Ascorbic Acid from Citrus Fruits
8. Estimation of Phosphorus
SEMESTER V
NAD301: BASIC DIETETICS

UNIT I: BASIC CONCEPTS OF DIET THERAPY
Therapeutic adaptation of normal diets. Principles and classification of therapeutic diets.

UNIT II: ROUTINE HOSPITAL DIETS AND FEEDING
Regular diet, light diet, soft diet, fluid diet. Enteral feeding - tube feeding. Parenteral Feeding - Central and peripheral.

UNIT III: ENERGY MODIFICATIONS AND NUTRITIONAL CARE FOR WEIGHT MANAGEMENT

UNIT IV: DISEASES OF THE GASTRO INTESTINAL TRACT

UNIT V: MODIFICATIONS OF DIET IN INFECTIONS AND SURGERY
TEXT BOOKS


REFERENCE BOOKS


NAD301: BASIC DIETETICS PRACTICALS

1. Standardisation of common recipes with their yield
2. Calculation of amount of foods that provide 100 calories.
3. Analysing effect of cooking on food.
5. Planning, Preparation and displaying of clear fluid diet, full fluid diet and soft diet.
7. Planning, preparation and displaying of diet for peptic ulcer, constipation and celiac sprue.
UNIT – I: EMERGENCE OF NEW LIFE
Planning and preparing for parenthood. Conception, prenatal development, delivery, prematurity and postmaturity. Postnatal care.

UNIT – II: INFANCY

UNIT – III: EARLY CHILDHOOD/PRESCHOOL [1-5 YEARS]

UNIT – IV: LATE CHILDHOOD/SCHOOL GOING [6-12 YEARS]

UNIT – V: ADOLESCENCE
Physical and psychological changes, emotional, moral and social development, sex education. Problems of adolescence, delinquency - causes, prevention and rehabilitation, role of parents, peers and society. Factors influencing personality development.
TEXTBOOKS


REFERENCES


NAD302: HUMAN DEVELOPMENT PRACTICALS

1. Child’s first reaction to nursery school.

2. Observations in the following areas of development - physical, social, emotional and language development of preschool children.

3. Study on play interest of children and types of play materials available in a preschool, preparation of play materials.

4. Study on behaviour problems of children.

5. Participation in nursery school, planning, carrying out and evaluating the programme.

UNIT I:  INTRODUCTION AND CONCEPTS  8 hours
Self- concepts, attitudes, goals and values.

UNIT II: TRANSACTIONAL ANALYSIS  8 hours
Introduction to transactional analysis - ego states, types of transactions, social time structuring, games, stamps, rackets, strokes and scripts.

UNIT III: PERSONALITY DEVELOPMENT  8 hours
Building self- esteem, social skills, assertiveness training and leadership.

UNIT IV: COMMUNICATION SKILLS  8 hours
Definition, listening, non-listening, verbal and non-verbal communication (body language) barriers to communication.

UNIT V: COUNSELING SKILLS  8 hours
Group and individual counseling, Diet counseling- different methods , the physical set-up, the dietitian’s tools and records.
Handling the patient and the patient’s family during counseling. Principle of family counseling.
Practical experience in personal counseling and diet counseling
TEXT BOOKS


REFERENCE BOOKS

1. Jee Curroie, Bare Foot Councillor, Bangalore.
2. Morgan and King – Introduction to Psychology
UNIT I: NUTRITIONAL STATUS ASSESSMENT AND SURVEILLANCE 6 hours
Meaning, need, objectives and importance. Community, regional, national and international surveillance systems.

UNIT II: RAPID ASSESSMENT PROCEDURES 7 hours
Need, importance, techniques, interpretation and steps in RAP.
Sources of secondary health data - sources of relevant vital statistics, importance of infant, child, maternal mortality rates, and epidemiology of nutrition related disease.

UNIT III: GROWTH CHART 8 hours
Meaning, WHO Chart, and charts used in India, uses, meaning of reference curve and growth curve.

UNIT IV: NUTRITIONAL ASSESSMENT 10 hours
Diet Surveys: need, importance, methods, interpretation, concept of conception unit, intra inter individual distribution in the family, verifying the adequacy of the diet with respect to RDA, concept of family food security.
Clinical signs, biochemical and biophysical methods: need, importance, identifying signs of deficiency diseases, interpretation of the clinical signs, biochemical and biophysical values in major diseases.
Anthropometry: Need, importance, standards for reference, techniques of measuring height, weight, head circumference, chest circumference, mid-arm circumference, skin fold thickness, waist hip ratio, calculation of BMI, interpretation of the measurements, use of growth charts for various age groups.

UNIT 5: NUTRITION AND DIET CLINIC 9 hours
TEXTBOOKS


REFERENCES


NAD311: PROJECT WORK (Internal)

NUTRITIONAL ASSESSMENT AND SURVEILLANCE

Project in the areas of nutrition assessment, community nutrition, therapeutic nutrition, diet counseling.
NAD305: CONSUMER ECONOMICS

UNIT – I: CONSUMER AND CONSUMERISM

UNIT – II: MARKET AND MARKETING
Market - meaning, definition, classification, functions of markets, market segmentation. Marketing - meaning and definition, concept of marketing, dimensions of marketing, functions of marketing. Channels of distribution - types and functions.

UNIT – III: CONSUMER BEHAVIOUR
Human wants - nature and classification, law of marginal utility, law of equimarginal utility, consumer surplus. Buyer behaviour - buying motives, buying decision process, factors affecting consumer decisions. Consumer products and promotion practices - types of products, branding, labeling, packaging, sales promotion and advertisement.

UNIT – IV: CONSUMER PROBLEMS
Business malpractices, adulteration, faulty weight and measures, misbranding, deceptive labeling and packaging.

UNIT – V: CONSUMER PROTECTION
Meaning, evolution, need for protection, laws for protection. Quality control measures - guarantee and warranty contracts, standardization, grading, BIS, AGMARK, FPO. Consumer courts, consumer co-operatives, consumer guidance societies.
TEXTBOOKS

2. Pillai, R.S.N., and Bagavathi, Modern Marketing, S. Chand and Company Ltd., New Delhi.

REFERENCES

SEMESTER –VI
NAD306: ADVANCED DIETETICS

UNIT I: DIET IN RELATION TO DEFICIENCY DISEASES 7 hours
Pathogenesis and dietary management in Nutritional Anemia, PEM, Vitamin A deficiency.

UNIT II: DISEASES OF CARDIO VASCULAR SYSTEM 8 hours
Aetiological factors, symptoms, diagnostic tests and dietary treatment for Atherosclerosis, Ischemic Heart Disease, Congestive Cardiac Failure, Hypertension, High fibre, low fat, Sodium restricted diet.

UNIT III: DISEASES OF THE KIDNEY 10 hours
Aetiological factors, symptoms, diagnostic tests and dietary treatment for
Acute and chronic Glomerulonephrities. - Low Sodium and low potassium diet.
Nephrotic Syndrome.
Acute and chronic Renal Failure- uremia.
Nephrolithiasis and urolithiasis.
Kidney transplantation and Dialysis.
Use of Sodium and Potassium exchange lists.

UNIT IV: DISEASE OF THE PANCREAS AND LIVER 9 hours
Diabetes Mellitus - Classification, Aetiological factors, symptoms, diagnostic tests, metabolic changes in the body, Insulin and oral hypoglycaemic drugs. Dietary Modifications with and without insulin, Complications of Diabetes, Food Exchange List. Glycemic Index and its use. Pancreatitis
Liver - Aetiological factors, symptoms, diagnostic tests and dietary treatment for Viral Hepatitis, Cirrhosis of the liver and liver encephalopathy – high carbohydrate diet. Cholelithiasis and cholecystitis – low fat diet

UNIT V: NUTRITION IN CANCER AND AIDS 7 hours
Aetiological factors, Symptoms, Diagnostic tests and Dietary Management.
TEXTBOOKS


REFERENCES


Planning, Preparation and displaying of Diet for

1. PEM and vitamin A deficiency.
2. Anemia during pregnancy and anemia in a normal person.
3. Hypertension and atherosclerosis.
4. Nephritis, nephritic syndrome and nephrolithiasis.
5. Diabetes Mellitus.
7. Cancer and AIDS.
UNIT I: FOOD QUALITY AND QUALITY CONTROL  
Meaning, objectives, important considerations, principles of – quality control of food, raw material and inspection of finished products. Total Quality Management (TQM) - Parameters, evolution, elements TQM, need for TQM and of implementation of TQM in the food industries.

UNIT II: INDEX OF NUTRITIONAL QUALITY (INQ)  
Need for INQ, INQ as an evaluating tool in the food industry, nutrition labeling of foods. Methods of assessing food quality - Cereals and Pulses, fruits and vegetables, milk, meat and its products, egg, Oils, fats, nuts and oilseeds.

UNIT III: STANDARD OF FOODS  
Cereals and Pulses, fruits and fruits products, vegetable and vegetable products, coffee, tea, sugar and sugar products, milk and milk products, eggs and selected fleshy foods.

UNIT IV: MICROBIOLOGICAL QUALITY CONTROL OF FOODS  
Fundamentals and Principles, factors influencing microbial association with foods, control of microflora at different stages of processing. Hazards Analysis and Critical Control Points (HACCP) - Meaning, Quality evaluation, steps involved in HACCP, Implementation and problems in HACCP

UNIT V: NUTRITIONAL CHANGES IN FOODS DURING PROCESSING  
Nutritional losses, nutritional gains, changes in the physical, chemical properties and organoleptic qualities of foods due to processing.
TEXT BOOKS


REFERENCE BOOKS


NAD308: PERSONNEL MANAGEMENT

UNIT I: PERSONNEL MANAGEMENT 8 hours

UNIT II: RECRUITMENT AND TRAINING 8 hours
Selection & training of Personnel. Work standards, productivity, supervision, performance appraisal. Motivation for effective performance. Labour policies and legislature. Law effecting food service operations, union and contract negotiations

UNIT III: ORGANIZATION & MANAGEMENT 9 hours
Organisation - Definition & types of organization. Management - Definition, functions and tools of management; Technique of effective management. Energy and Time Management & its application in food preparation and service

UNIT IV: FOOD MATERIAL MANAGEMENT 9 hours
Meaning, definition, importance. Food selection, Purchasing, receiving and store - room management. Control in relation to the above operations (material planning, budgeting, material identification, codification and standardization, inventory control). Storekeeping, definition, objectives functions, factors underlying successful storekeeping, duties and responsibilities of a storekeeper. Purchasing – organization, principles, procedures, systems and quality control.

UNIT V: ADMINISTRATIVE LEADERSHIP 6 hours
Definition of leader, leadership. Leadership styles. Role of a leader, qualities of a leader.
TEXT BOOKS


2. Drucker, P.F. (1975); Management, Allied published, New Delhi

REFERENCE BOOKS


UNIT I: LODGING INDUSTRIES  
Evolution and types of lodging establishment. House Keeping Department - Staffing, training, functions of Housekeeping department, Job Description and job specification. Relationship of house keeping with guests and other departments.

UNIT II: INTERIOR ENVIRONMENT DESIGN AND STYLE  
Size of the room, Placement of doors and windows. Elements and Principles of design and its application.

UNIT III: SOFT FURNISHINGS  

UNIT IV: CARE AND CLEANING  

UNIT V: SAFETY AND SECURITY  
Fire Prevention and control, Accident prevention, Security measures, First - aid, pest control.
TEXT BOOKS


REFERENCES


3. Allen D.M. Accommodation and cleaning services, Vol.II

NAD309: HOUSE KEEPING PRACTICALS

1. Visit to House keeping departments in the hotels

2. Demonstration for Bedding, Laundering and dry cleaning, stain removal.

3. Market survey for equipment, chemicals, furniture and other materials used in house keeping.

4. Room inspection.

5. Demonstration of flower arrangement, special decorations.
UNIT I: ENTREPRENEURSHIP

Definition - Characteristics of an entrepreneur, Entrepreneur & enterprise. Traits of a true entrepreneur, type of entrepreneur, functions of an entrepreneur, behavioural patterns of entrepreneur. Entrepreneurial Motivation - Motivating factors, Facilitating factors, Achievement motivation, the Kakinada Experiment.

UNIT II: PROJECT IDENTIFICATION & CLASSIFICATION


UNIT III: FINANCIAL INSTITUTIONS

NABARD, IDBI, IFCI, DIC – PIPDIC, SIS, SISI, SIDBI, SIPCOT, GIC Commercial banks, - their loan facilities. Choice of most suitable agency. Approaching an institution for assistance.

UNIT IV: ACCOUNTS AND BOOK KEEPING


UNIT V: APPLICATION OF COMPUTER IN ENTREPRENEURSHIP DEVELOPMENT

I. MS – Windows

II. MS-WORD
Starting MS- WORD, Creating and Formatting a document, Changing Fonts and point size, Table Creation and Operations, Autocorrect, Auto Text, Spell Check, Thesaurus, Word Art, Inserting objects, Mail merge, letter, lable, envelope, Page set-up, Page preview, Printing a document.
TEXTBOOKS


REFERENCES


Related Experiences

1. Conduct of mini market survey (one day exercise) through Data Collection questionnaire, & personal visits.

2. Entrepreneurial motivation training through games, role-playing discussions & exercise.

3. a) Analysis of sample project report – discussion
   b) Break even analysis - Practice