Syllabus For
B.Sc. in Human Nutrition
(B.Sc.-HN)
Academic Programme

Duration : 3 years
DURATION OF COURSE:
- B.Sc. in Human Nutrition course will be a full time course.
- Duration will be three years.
- This course shall be divided into three professional examinations namely B.Sc. in Human Nutrition (B.Sc.-HN) Part-I at the end of first academic year, B.Sc.-HN Part-II at the end of second academic year and B.Sc.-HN Part-III at the end of third academic year.

EXAMINATION:
- There shall be an annual university examination at the end of each academic year in the form of theory papers and practical examinations. The candidate shall be required to appear in every subject as specified in the course structure for each year.

Duration of Examination:
- Each theory paper shall be of three hours duration.

Scheme of Examination:

<table>
<thead>
<tr>
<th>B.Sc. in Human Nutrition Part-I (First Year) University Examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. No.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

Grand Total 900

<table>
<thead>
<tr>
<th>B.Sc. in Human Nutrition Part-II (Second Year) University Examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. No.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>Grand Total</td>
</tr>
</tbody>
</table>
INTERNAL ASSESSMENT

- It will be for theory and practical both.
- It will be done through the whole year.
- Candidate must obtain at least 35% marks in theory and practicals separately in internal assessment to be eligible for the annual university examination.
- Internal assessment (Theory) will be done as follows:
  a) Mid-term and term examinations = 10 marks
  b) Assignments/Projects/Class test/Clinical Presentations = 05 marks
  c) Attendance = 05 marks
  Total = 20 marks

Internal assessment (Practical) will be done as follows:
  a) Laboratory manual = 10 marks
  b) Day to day performance = 05 marks
  c) Attendance = 05 marks
  Total = 20 marks

CRITERIA FOR PASSING

- A candidate is declared to have passed University examination in a subject, if he/she secures 50% of the marks in theory and 50% in practicals separately. For computation of 50% marks in theory, the marks scored in the internal assessment (theory) shall be added to the University conducted written examination and for passing in practical the marks scored in University conducted practical examination and internal assessment (practical) shall be added together.

GRACE MARKS:

- If a candidate fails in one subject (theory only) in the annual University examination, five grace marks will be given to the candidate by the University before the declaration of result.
- Candidate failing in practical examination will be considered as failed.

SUPPLEMENTARY EXAMINATION:

- A candidate failing in a subject but securing at least 30% aggregate marks will be required to appear in the university examination after 3 months in that subject/subjects while attending classes of next year. Those who secure less than 30% aggregate marks will be required to appear in all the subjects.
• If the candidate fails in supplementary examination his/her session will be shifted by one year. The candidate will have to take admission in the previous year and pay the tuition fee for the academic year. He/she will have to appear in all the subjects in the examination.
• Supplementary examination will be held not earlier than 3 months and later than 6 months from the date of annual University examination.

DIVISION:
• Candidate will be awarded division at the end of 3rd academic year as follows:
  - Distinction - 75% and above marks in any subject.
  - First division - 60% and above in the aggregate of marks of all subjects.
  - Second division- 50% or more but less than 60% in the aggregate of marks of all subjects.

DEGREE:
• The degree of B.Sc. in Human Nutrition course of the University shall be conferred on the candidates who have pursued the prescribed course of study for not less than three academic years and have passed examinations as prescribed under the relevant scheme.

COURSE OF STUDY

**B.Sc. in Human Nutrition  Part-I (First Year)**

<table>
<thead>
<tr>
<th>Sl.</th>
<th>Subjects</th>
<th>Teaching hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theory</td>
</tr>
<tr>
<td>1</td>
<td>Basic Nutrition</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Human Physiology</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>Nutritional Biochemistry</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>Family meal management</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>On the job training</td>
<td></td>
</tr>
</tbody>
</table>

**B.Sc. in Human Nutrition  Part-II (Second Year)**

<table>
<thead>
<tr>
<th>Sl.</th>
<th>Subjects</th>
<th>Teaching hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theory</td>
</tr>
<tr>
<td>1</td>
<td>Basic Dietetics</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Food Microbiology</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>Food Science</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Personnel Management</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>On the job training</td>
<td></td>
</tr>
</tbody>
</table>

**B.Sc. in Human Nutrition  Part-III (Third Year)**

<table>
<thead>
<tr>
<th>Sl.</th>
<th>Subjects</th>
<th>Teaching hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theory</td>
</tr>
<tr>
<td>1</td>
<td>Community Nutrition</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Advanced Dietetics</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>Dietetics &amp; Counseling</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>Practical work</td>
<td></td>
</tr>
</tbody>
</table>
B.Sc. in Human Nutrition (B.SC.-HN) First Year

BASIC NUTRITION
Subject Code : BHN-101
Min. Hrs - Theory : 100 hrs & Practical : 80 hrs.

THEORY

1. Introduction to nutrition -
   Food as source of nutrients, functions of food, definition of nutrition, nutrients &
   energy, adequate, optimum & good nutrition, malnutrition.
3. Food guide - Basic five food groups
   How to use food guide (according to R.D.A.)
4. Interrelationship between nutrition & health :
   Visible symptoms of goods health
5. Use of food in body - Digestion, Absorption, transport & utilization.
6. Role of fibres in human nutrition.
7. Carbohydrates : Functions, classification, food sources, storage in body.
8. Fats & oils : composition, saturated and unsaturated fatty acids, classification, food
   sources, function of fats.
9. Proteins - composition, sources, essential & non-essential amino acids, functions,
   Protein deficiency.
10. Water - as a nutrient, function, sources, requirement, water balance & effect of
    deficiency.
11. Minerals - macro & micronutrients. - functions, sources. Bioavailability and
    deficiency of Calcium, Iron, Iodine, Sodium & Potassium (in very brief)
13. Effect of cooking & heat processing on the nutritive value of foods.
14. Processed supplementary foods.
15. Food sanitation in hygiene.

PRACTICAL

1. Use and care of kitchen equipments.
2. Controlling techniques -
   Weights and measures standard, household measures for raw and cooked food.
3. Food preparation and classifying recipes as good, moderate or poor, sources of
   specific nutrients, Amount of ingredients to be in standard recipe -
   a) portion size -
   b) Beverages - tea, coffee, cocoa, fruit juice, milk, milk shakes.
   c) Cereals and flour mixtures - basic preparation & their nutritive value -
      boiled rice and rice pulao, chapati, puri, paratha, sandwiches, pastas, pancakes,
      cookies & cakes.
4. Vegetables & fruits -
   Simple salads, Dry vegetables, Curries, fruits preparation using fresh and dried stewed
   fruit, fruit salad
5. Mix and milk products
   Porridges, Curds, paneer and their commonly made preparations, Milk based simple
   desserts and puddings, custard, kheer, ice cream
6. Meat - cuts of meat -
   Meat preparations, Poultry, Fish, hard and soft cooked, poached, scrambled, fried
   omelette & eggnogs.
7. Soups - Basic, clear and cream soups.
8. Snacks- Pakoras, cheese toast, upma, pohe, peanut, chikki, til & laddo
HUMAN PHYSIOLOGY
Subject Code : BHN-102
Min. Hrs - Theory : 100 hrs & Practical : 80 hrs.
THEORY
1. Cell - Structure and function
2. Blood - Blood cells, Haemoglobin, Blood groups, Coagulation Factors, Anaemia
4. Cardiovascular system
   Heart rate, Cardiac cycle, cardiac output, blood pressure, hypertension, radial pulse.
5. Lymphatic system - Lymph glands and its function, spleen - structure and functions.
6. Respiratory System - Ventilation, Functions, Lungs volumes and capacities.
8. Endocrinology
   List of Endocrine glands, Hormones: Their secretion and functions (in brief).
9. Excretion system - Structure of nephron, Urine formation
10. Central Nervous System
    Parts, Sliding Filament Theory, Neuro Muscular Junction, Wallerian Degeneration,
    Motor Nervous system - Upper motor neuron system & lower motor neuron system.
    Sensory nervous system, Sympathetic Nervous system & Parasympathetic nervous system.
11. Skin - Structure and functions
12. Reproductive system
    Structure and functions of male & female reproductive organs, menstruation, puberty,
    menopause, fertilization and development of fertilized ovum, placenta and its function.
13. Special senses
    Structure and function of eye and ear, common diseases of eye and ear (in brief)

PRACTICAL
1. Microscope and its use.
2. Microscopic appearance of prepared slide.
3. Identification of blood cells by study of peripheral blood smear.
5. Elicitation of Reflexes and jerks.
6. Estimation of haemoglobin, RBC, WBC, TLC, DLC and ESR.

NUTRITIONAL BIOCHEMISTRY
Subject Code : BHN-103
Min. Hrs - Theory : 100 hrs & Practical : 80 hrs.
THEORY
1. Basics of energy metabolism, nutrition & dietetics -
   Unit of measuring energy, calorific value of food, BMR & factors affecting it, SDA of food,
   calculation of energy requirement, balanced diet, nutrition in health & diseases
   (protein energy malnutrition).
2. Chemistry of carbohydrates & their related metabolism -
   Introduction, definition, classification, biomedical importance
   Brief outline of metabolism:
   Glycogenesis & glycogenolysis (in brief), Glycolysis, citric acid cycle & its significance,
   HMP shunt & Gluconeogenesis (in brief), regulation of blood glucose level.
3. Amino acids - Definition, classification, essential & non essential amino acids.
4. **Chemistry of Proteins & their related metabolism** -
   Introduction, definition, classification, biomedical importance
   Metabolism:
   Transformation, Decarboxylation, Ammonia formation & transport, Urea cycle.

5. **Chemistry of Lipids & their related metabolism** -
   Introduction, definition, classification, biomedical importance, essential fatty acids,
   identification of fats & oils (saponification no, acid no, iodine no, acetyl no, reichert-miesel no. etc.)
   Brief out line of metabolism:
   Beta oxidation of fatty acids, Ketosis, Cholesterol & its clinical significance,
   Lipoproteins in the blood composition & their functions in brief, Atherosclerosis.

6. **Enzymes** -
   Introduction, definition, classification, coenzymes, isoenzymes, properties, factors
   affecting enzyme action, enzyme inhibition, diagnostic value of serum enzymes -
   Creatinine kinase, Alkaline phosphatase, Acid phosphatase, LDH, SGOT, SGPT,
   Amylase, Lipase, Carbonic anhydrase etc.

7. **Acid base balance concepts & disorders** - pH, Buffers, Acidosis, Alkalosis

8. **Hormones** -
   Classification, general mode of action, hormones of Pituitary, Thyroid, Parathyroid,
   Adrenals, Reproductive Glands, Pancreas, hormonal disorders, counter regulatory
   hormones.

9. **Vitamins** -
   Water & fat soluble vitamins, sources, requirement, deficiency disorders & biochemical
   functions.

10. **Water metabolism** -
    Distribution of fluids in the body, ECF, ICF, Water metabolism, dehydration.

11. **Hyperglycemia & hypoglycemia** -
    Diabetes mellitus - definition, types, features, gestation diabetes mellitus, glucose
    tolerance test, glycosurias, Hypoglycemia & its causes

12. **Liver functions and their assessment** -
    Based on -
    a) Carbohydrate metabolism
    b) Protein metabolism
    c) Lipid Metabolism
    d) Measurements of serum enzyme levels
    e) Bile pigment metabolism: Jaundice - its types and their biochemical findings.

13. **Renal functions tests** -
    Various tests, GFR & clearance.

14. **Tumor markers & their clinical applications** -
    Including oncofeatal antigens, CEA etc.

15. **General concepts & functions of immunoglobulins**

**PRACTICAL**

1. Identification of carbohydrates (Qualitative Tests)
2. Identification of proteins (Qualitative Tests)
3. To study general properties of the enzyme Urease & Achromatic time of salivary amylase.
4. Estimation of glucose in urine by Benedict's methods
5. Urine analysis - normal & abnormal constituents of urine.
FAMILY MEAL MANAGEMENT
Subject Code : BHN-104
Min. Hrs - Theory : 100 hrs & Practical : 80 hrs.

THEORY
1. Introduction to meal management - balanced diet, food groups & the planning of balance diet.
2. Food guides for selecting adequate diet.
3. Diet therapy
5. Meal planning for the family.
6. Indian meal patterns - vegetarian & non-vegetarian.
7. Food faddism & the faulty food habits.
8. Nutritive value of common Indian recepies.
10. Nutrition during lactation - Physiology of lactation, nutritional requirements.

PRACTICAL
Planning, preparation and nutritional evaluation of diets in relation to activity levels and physiological state.
1. Planning and preparation of a balanced diet for a pregnant woman.
2. Diet during complication of pregnancy.
3. Planning and preparation of a balanced diet for a lactating woman.
4. Preparation of weaning foods.
5. Planning and preparation of a balanced diet for pre-school child.
7. Planning and preparation of a balanced diet for adolescence.
8. Planning of meals for adult belonging to different income group.
10. Project work with proper diet plan based on survey.

ON THE JOB TRAINING
Min. Hrs - 160 hrs.
1. The students of first year shall do the survey of patients suffering from various diseases and shall plan appropriate diet for them.
2. They shall maintain logbook of patients and their diets.
3. At the end of academic year their logbooks will be evaluated by the faculty concerned.
B.Sc. in Human Nutrition (B.SC.-HN) Second Year

BASIC DIETETICS
Subject Code : BHN-201
Min. Hrs - Theory : 100 hrs & Practical : 100 hrs.

THEORY
1. Role of dietarian : The hospital & community.
2. Basic concepts of diet therapy.
4. Adaptation of normal diet for changing needs.
5. Routine hospital diets - Regular diet, light diet, full liquid and tube feeding.
6. Modification of diet - Febrile conditions, infections and surgical conditions.
7. Diets for gastro - intestinal disorders, constipation, diarrhoea, peptic ulcer.
10. Diet for Diabetes mellitus.
11. Diet & nutrition in kidney diseases.
17. Nutrient drug interaction.
18. Feeding the patients - Psychology of feeding the patient, assessment of patient needs.
20. Nutrition & diet clinics - Patients checkup and dietary counseling, educating the patient and follow up.

PRACTICAL
1. Planning, preparation and calculation of following diets :
   a) Normal diet.
   b) Liquid diet
   c) Soft diet
   d) High and low caloric diet
   e) Bland diet for peptic ulcer
   f) Diet for Viral hepatitis and cirrhosis
   g) Diet for Diabetes mellitus
   h) Diet for Hypertension and Atherosclerosis
   i) Diet for Nephritis and Nephrotic syndrome
2. Low and medium cost diets for P.E.M., Anemia & vitamin A deficiency.
FOOD MICROBIOLOGY
Subject Code : BHN-202
Min. Hrs - Theory : 80 hrs & Practical : 80 hrs.

THEORY
1. Introduction of microbiology and its relevance to everyday life. General characteristics of bacteria, fungi, virus, protozoa, and algae.
2. Growth of microorganisms: Growth curve, effect of environmental factors in growth of microorganism - pH, water activity, oxygen availability, temperature and others.
3. Microbiology of deficient food: Spoilage, contamination sources, types, effect on the following:
   a. Cereal and cereal products
   b. Sugar and sugar products.
   c. Vegetables and fruits
   d. Meat and meat products.
   e. Fish, egg and poultry, Milk and milk products
   g. Canned foods.
4. Environmental microbiology:
   a. Water and water borne diseases.
   b. Air and air borne diseases.
   c. Soil and soil borne diseases.
   d. Sewage and diseases.
5. Beneficial effect of microorganisms.
6. Relevance of microbial standards for food safety.
7. Waste product handling:
   a. Planning for waste disposal.
   b. Solid wastes and liquid wastes.
8. Microbial intoxication and infections: Sources of contamination of food, toxin production and physiological action, sources of infection of food by pathogenic organisms, symptoms and method of control.
9. Relevance of microbiology standards for food safety.

PRACTICAL
1. Study of equipments in a microbiology lab.
2. Preparation of laboratory media and special media, cultivation of bacteria, yeasts and moulds.
4. Cultivation and identifications of important molds and yeast in food items.
5. Demonstration of available rapid methods and diagnostic kits used in identification of microorganisms or their products.
6. Visits (at least two) to food processing units or any other organization dealing with advanced methods in food microbiology.
FOOD SCIENCE
Subject Code : BHN-203
Min. Hrs - Theory : 80 hrs & Practical : 80 hrs.

THEORY
2. Pulses: composition and nutritional value, processing, soaking, germination.
5. Milk and milk products: Composition of milk, properties and effect of heat, nutritional importance, milk processing, milk products.
6. Flesh foods- selection, storage, uses and nutritional aspects of meat, fish and poultry, spoilage of fish.
8. Sugar and Sugar products
   (a) Form of sugar and liquid sweetness.
   (b) Caramelization, Hydrolysis, Crystallization
   (c) Indian confectionery
10. Fats and oils: Types, role of fat in cookery.
12. Baking - Types of bake products & its nutritive value.
13. Role of spices in food science - Importance, composition & classification.

PRATICAL
1. Detection of toxins and adulterants of some of the common foods.
2. Preparation of some confectionary products.
3. Preparations of some traditional, fermented and other products.
4. Preparation of soyabean products and their acceptability test.
5. Survey of marketed processed and labeling of processed food items.
6. Nutritional value & criteria of food selection in Indian diet according to ICMR.
7. Visit to confectionaries.

PERSONNEL MANAGEMENT
Subject Code : BHN-204
Min. Hrs - Theory : 100 hrs & Practical : 80 hrs.

THEORY
1. Organization and management:
   a) Definition and types of organization.
   b) Definition- functions and tools of management.
   c) Technique of effective management and its application to food preparation and science.
2. Food material management:
   a) Meaning, definition, and importance.
b) Food selection, purchasing, receiving and storeroom management.
c) Control in relation to the above operations (material planning, budgeting, material identification, modification and standardization, inventory control, store keeping, definition, objectives, functions, factors underlying successful storekeeping, duties and responsibilities of a storekeeper, purchasing, organization, principle, procedure, systems and quality control).

3. Personnel Management: Recruitment, selection and training of personalities, work standards, productivity, supervision, performance appraisal and motivation incentives for effective performances.

4. Labour policies and legislation: (Personnel policies related to salaries, other emoluments, allowances, leave, uniform and other prize benefit, laws and organization)- Laws affecting food service institution to study the following: (hospital, flight kitchen, hotel, restaurant, canteen, Industrial) -
   a. Organization
   b. Physical plan and layout.
   c. Food and silver equipment
   d. Sanitation and hygiene.

PRACTICAL
Visit and appraisal of any two medical organization.
1. Work simplification: food preparation, Calculating work unit, time norms etc.
2. Costing, accounting, budgeting, purchase.
3. Storekeeping: Listing and management of food items in the store.
4. Personnel recruitment: Preparations of a project and report making.
5. Maintenance of the clothing for persons and staff involved in kitchen area.
6. Prepare an inventory for evaluating staffs personal hygiene.

ON THE JOB TRAINING
Min. Hrs - 160 hrs.
1. The students of first year shall do the survey of patients suffering from various diseases and shall plan appropriate diet for them.
2. They shall maintain logbook of patients and their diets.
3. At the end of academic year their logbooks will be evaluated by the faculty concerned.

B.Sc. in Human Nutrition (B.SC.-HN) Third Year

COMMUNITY NUTRITION
Subject Code : BHN-301

Min. Hrs - Theory : 100 hrs & Practical : 100 hrs.

THEORY
1. Nutrition and health in National development.
2. Malnutrition- meaning, factors contributing to malnutrition, over nutrition.
3. Nutritional disorders- Epidemiology, clinical features, prevention and dietary treatment for Protein Energy malnutrition, nutritional anaeamias & vitmain deficiency disorders .
4. Methods of assessing nutritional status:
   a) Sampling techniques , Identifications of risk groups,
   b) Direct assessment - Diet surveys, anthropometric, clinical and biochemical estimation.
   c) Indirect assessment- Food balance sheet, ecological parameters and vital statistics.
5. Improvement of nutrition of a community:
   a) Modern methods of improvement or nutritional quality of food, food fortification, enrichment and nutrient supplementations.
   b) Nutrition education themes and messages in nutrition and health, Antenatal and postnatal care.
8. Community nutrition programme planning - Identification of problem, analysis of causes, resources constraints, selection of interventions, setting a strategy, implementations and evaluation of the programme.

PRACTICAL

1. Diet and nutrition surveys:
   a) Identification of vulnerable and risk groups.
   b) Diet survey for breast-feeding and weaning practices of specific groups.
   c) Use of anthropometric measurement in children.
2. Preparation of visual aids.
3. Field visit to
   a) Observe the working of nutrition and health oriented programmes (survey based result).
   b) Hospitals to observe nutritional deficiencies.

ADVANCED DIETETICS
Subject Code: BHN-302
Min. Hrs - Theory: 100 hrs & Practical: 100 hrs.

THEORY
2. Role of Dietician: Definition of nutritional care, interpersonal relationship with patient, planning and implementary dietary care, Team approach to nutritional care.
3. Routine hospital diets: Preoperative and postoperative diets, study and review of hospital diet. Basic concepts and methods of -
   a) Oral feeding
   b) Tube feeding
   c) Parental nutrition
   d) Intravenous feeding.
4. Diet in surgical conditions, burns and cancer.
5. Obesity and leanness- causes, complication and health effects, dietary treatment and other recommendation.
7. Diet in gastritis, peptic ulcer- symptoms, clinical findings, treatment, dietary modification, adequate nutrition, amount of food, and intervals of feeding, Chemically
and mechanically irrigating foods, four stage diet (Liquid, soft, convalescent, liberalized diet).

8. Diet in disturbances of small intestine and color.
   • Diarrhoea- (child and adult)- classification, modification of diet, fibre, residue, fluids & nutritional adequacy.
   • Constipation- flatulence - dietary considerations.
   • Ulcerative colitis (adults)- symptoms, dietary treatment.
   • Sprue, coeliac disease- disaccharide intolerance, dietary treatment.

9. Diet in diseases of the liver, gall bladder and pancreas,
   a) Etiology, symptoms and dietary treatment in - Jaundice, hepatitis, cirrhosis and hepatic coma.
   b) Role of alcohol in liver diseases. 
   c) Dietary treatment in cholecystitis, cholelithiasis and pancreatitis.


12. Diet in Diabetes mellitus:
   a) Incidence and predisposing factors.
   b) Symptoms-types and tests for detection.
   c) Metabolism in diabetes
   d) Dietary treatment & meal management
   e) Hypoglycemic agent, insulin and its types.
   f) Complication of diabetes.

13. Diet in Renal diseases:
    Basic renal function, symptoms and dietary treatment in acute and chronic glomerulonephritis, Nephrosis, renal failure, dialysis. urinary calculi-causes & treatment, acid and alkali producing and neutral foods and dietary treatment.

14. Diet in Cardiovascular diseases:
    Role of nutrition in cardiac efficiency, incidence of Atherosclerosis, dietary principles, Hyperlipidenmia, Hypertension- causes and dietary treatment, Sodium restricted diet, level of sodium restriction, sources of sodium, danger of severe sodium restriction.

PRACCTICAL

1. Planning, preparations and calculations of diets with modified-
   (a) Consistency
   (b) Fibre and residue
   (c) Diet for Diarrhoea and constipation
   (d) Diet for peptic ulcer.
   (e) Diet for liver disease.


6. Planning, preparations and calculation of diet in Cancer, Trauma (burns) & Surgery.
DIETETICS AND COUNSELLING  
Subject Code : BHN-303 
Min. Hrs - Theory : 100 hrs & Practical : 100 hrs.

THEORY
1. Practical consideration in giving dietary advice and counselling -
   a) Factors affecting and individual food choice.
   b) Communication of dietary advice
   c) Consideration of behaviour modification
   d) Motivation.
2. Counselling and educating patient
   a) Introduction to nutrition counselling
   b) Determining the role of nutrition counsellor
   c) Responsibilities of the nutrition counsellor
   d) Practitioner v/s client managed care
   e) Conceptualizing entrepreneur skills and behaviour
   f) Communication and negotiation skills.
3. Teaching aids used by dietitians- charts, leaflets, posters etc., preparation of teaching material for patients suffering from Digestive disorders, Hypertension, Diabetes, Atherosclerosis & Hepatitis and cirrhosis.
4. Computer application
   a) Use of computers by dietitian
   b) Dietary computations
   c) Dietetic management
   d) Education/ training
   e) Information storage
   f) Administrations
   g) Research
5. Computer application
   a) Execution of software packages
   b) Straight line, frequency table, bar diagram, pie chart, Preparation of dietary charts for patients
   c) Statistical computation- mean, median, standard deviation, conclusion and regression test.

PRACTICAL
1. Project planning for any one disease.
2. Computer application for different diseases.
3. Submitting computed data.
4. Preparations of teaching aids in the field of nutrition.
5. Preparation of case history of a patient and feeding of information in the hard disc.
PROJECT WORK
Min. Hrs.-160 Hrs

1. Basic concepts of project planning
   a) Defining objectives - Need, problem, project, feasibility, planning, formulation.
   b) Identifying resources
   b) Methods/approaches, Project Appraisal - Project Format

2. Guideline for project writing
   - Title of the project
   - Name of the person
   - Duration of the project, type of project.
   - Aims and objectives - summary of the proposed project
   - Project information, location, people and personnel involved.
   - Working/methodology
   - Evaluation
   - Writing and reporting