

Proposed scheme for choice based credit system In

B.Sc. APPLIED NUTRITION AND PUBLIC HEALTH

| FIRST YEAR SEMESTER I | | | | |
|-----------------------------------|---|--------------------|------------|----------------|
| CODE | COURSE TITLE | COURSE TYPE | HPW | CREDITS |
| BS101 | ENVIRONMENTAL STUDIES | AECC I | 2 | 2 |
| BS102 | ENGLISH | CC- I A | 5 | 5 |
| BS103 | SECOND LANGUAGE | CC -2 A | 5 | 5 |
| BS104 | NUTRITIONAL BIOCHEMISTRY-I | DSC- IA | 4T+2P=6 | 4+1=5 |
| BS105 | OPTIONAL II | DSC -2A | 4T+2P=6 | 4+1=5 |
| BS 106 | OPTIONAL III | DSC- 3A | 4T+2P=6 | 4+1=5 |
| | TOTAL | | | 27 |
| SEMESTER II | | | | |
| BS 201 | GENDER SENSITIZATION | AECC 2 | 2 | 2 |
| BS 202 | ENGLISH | CC- I B | 5 | 5 |
| BS 203 | SECOND LANGUAGE | CC -2 B | 5 | 5 |
| BS 204 | NUTRITIONAL BIOCHEMISTRY-II | DSC- IB | 4T+2P=6 | 4+1=5 |
| BS 205 | OPTIONALII | DSC- 2B | 4T+2P=6 | 4+1=5 |
| BS 206 | OPTIONAL III | DSC- 3B | 4T+2P=6 | 4+1=5 |
| | TOTAL | | | 27 |
| SECOND YEAR - SEMESTER III | | | | |
| BS 301 | FOOD SERVICE MANAGEMENT SKILLS | SEC - I | 2 | 2 |
| BS 302 | ENGLISH | CC- IC | 5 | 5 |
| BS 303 | SECOND LANGUAGE | CC -2C | 5 | 5 |
| BS 304 | FOOD SCIENCE | DSC - IC | 4T+2P=6 | 4+1=5 |
| BS 305 | OPTIONAL- II | DSC- 2C | 4T+2P=6 | 4+1=5 |
| BS 306 | OPTIONAL- III | DSC- 3C | 4T+2P=6 | 4+1=5 |
| | TOTAL | | | 27 |
| SEMESTER IV | | | | |
| BS 401 | QUANTITY FOOD PRODUCTION | SEC - 2 | 2 | 2 |
| BS 402 | ENGLISH | CC- I D | 5 | 5 |
| BS 403 | SECOND LANGUAGE | CC -2 D | 5 | 5 |
| BS 404 | FAMILY & COMMUNITY NUTRITION | DSC – 1D | 4T+2P=6 | 4+1=5 |
| BS 405 | OPTIONAL- II | DSC- 2D | 4T+2P=6 | 4+1=5 |
| BS 406 | OPTIONAL- III | DSC- 3D | 4T+2P=6 | 4+1=5 |
| | TOTAL | | | 27 |
| THIRD YEAR – SEMESTER V | | | | |
| BS501 | HOSPITAL ADMINISTRATION SKILLS | SEC - 3 | 2 | 2 |
| BS 502 | FUNDAMENTALS OF FOOD & NUTRITION | GE-1 | 2 | 2 |
| BS 503 | CLINICAL DIETETICS | DSC – 1E | 3T+2P=5 | 3+1=4 |
| BS 504 | OPTIONAL- II | DSC – 2E | 3T+2P=5 | 3+1=4 |
| BS 505 | OPTIONAL- III | DSC – 3E | 3T+2P=5 | 3+1=4 |

| | | | | |
|---------------------|---|----------|---------|------------|
| BS 506 | A) FOOD SAFETY & QUALITY CONTROL (OR) B) FOOD HYGIENE AND SANITATION | DSE-1E | 3T+2P=5 | 3+1=4 |
| BS 507 | OPTIONAL II A/B/C | DSE – 2E | 3T+2P=5 | 3+1=4 |
| BS 508 | OPTIONAL II A/B/C | DSE – 3E | 3T+2P=5 | 3+1=4 |
| | TOTAL | | | 28 |
| SEMESTER- VI | | | | |
| BS 601 | PATIENT COUNSELLING TECHNIQUES & SKILLS | SEC-4 | 2 | 2 |
| BS 602 | PERSPECTIVES OF FOOD SAFETY IN INDIA | GE - 2 | 2T | 2 |
| BS 603 | PUBLIC HEALTH | DSC- 1F | 3T+2P=5 | 3+1=4 |
| BS 604 | OPTIONAL- II | DSC – 2F | 3T+2P=5 | 3+1=4 |
| BS 605 | OPTIONAL- III | DSC – 3F | 3T+2P=5 | 3+1=4 |
| BS 606 | A) FOOD PRESERVATION (OR) B) ADVANCED DIETETICS | DSE – 1F | 3T+2P=5 | 3+1=4 |
| BS 607 | OPTIONAL II A/B/C | DSE – 2F | 3T+2P=5 | 3+1=4 |
| BS 608 | OPTIONAL II A/B/C | DSE – 3F | 3T+2P=5 | 3+1=4 |
| | TOTAL | | | 28 |
| | TOTAL CREDITS | | | 164 |

CC-Core Course

AECC- Ability Enhancement Compulsory Course

DSC- Discipline Specific Course

SEC- Skill Enhancement Course

DSE- Discipline Specific Elective

GE- General Elective

HPW- Hours Per Week

SUMMARY OF CREDITS FOR B.SC (APPLIED NUTRITION & PUBLIC HEALTH)
PROGRAM

| S.NO | COURSE CATEGORY | NO.OF COURSES | CREDITS PER COURSE | CREDITS |
|------|------------------|---------------|--------------------|---------|
| 1. | AECC | 2 | 2 | 4 |
| 2. | SEC | 4 | 2 | 8 |
| 3. | CC | 8 | 5 | 40 |
| 4. | DSC | 12 | 5 | 60 |
| 5. | DSC | 6 | 4 | 24 |
| 6. | DSE | 6 | 4 | 24 |
| 7. | GE | 2 | 2 | 4 |
| | TOTAL | 40 | | 164 |
| | OPTIONALS(TOTAL) | 24 | | 108 |

**B.SC. III YEAR
V - SEMESTER
SEC-3 , PAPER III
HOSPITAL ADMINISTRATION AND SKILLS**

PERIODS: 30

MAX. MARKS: 40

NO. OF CREDITS: 2

UNIT I: HOSPITAL ADMINISTRATION & ORGANISATION

15 HOURS

- Routine admission/ discharge summary & medical terminology
- Daily reports-hospital census, matron's report, medical officer's report
- Medical certificates- birth & death certificates.
- Hospital management hierarchy
- Hospital committees.

**UNIT II: PATIENT CARE SERVICES & HOSPITAL WASTE MANAGEMENT
15 HOURS**

- Patient admission & discharge
- Cafeteria & dietary services.
- Administration of patient related schemes-
 - Cashless services-CGHS, ECHS, CSMA, TPA, ESA
 - Medical insurance
- Definition of bio medical waste, BMW- segregation, collection, transportation, disposal
- BMW Management & methods of disinfection, modern technology for handling BMW, standard operating procedures.
- Monitoring &controlling of cross infection(protective devices)

Reference books:

1. Principles of hospital administration- S.A. Tabish
2. Hospital administration – S.L.Goel
3. Hospital administration – McGibony
4. Bio medical waste act & rules govt. of india
5. Current issues in BMW waste handling- ISHA Bangalore

Suggested books:

1. Medical records, organization & management –GP Mogli, Jaypee brothers
2. Hospital waste management – AG Chandrokar- paras medical publishers
Total quality management- BIS monograph.

**B.SC. III YEAR
V - SEMESTER
GE-1, PAPER I
FUNDAMENTALS OF FOOD AND NUTRITION**

**PERIODS: 30
NO. OF CREDITS: 2**

MAX. MARKS: 40

UNIT I: FUNDAMENTALS OF FOOD

15 HOURS

- Definition of food, Types of foods- Nano foods, Convenience foods,
- Texturized Foods, space Foods, Novel foods, Organic foods

UNIT II: FUNDAMENTALS OF NUTRITION

15 HOURS

- Definition of Nutrition
- Digestion, absorption & assimilation of nutrients in human gut
- Benefits of intestinal microflora- Pre & probiotics.

REFERENCE BOOKS:

1. Sri Lakshmi. B, Nutrition Science, New age international pvt. Ltd. publishers.
2. Srilakshmi B. Food Science, New Age International pvt. Ltd publishers
3. Biochemistry- U Satyanarayana, U chakrapani, Books and Allied(P. Ltd.)

**B.SC. III YEAR
V - SEMESTER
DSC – IE, PAPER – V
CLINICAL DIETETICS**

**PERIODS: 45
NO. OF CREDITS: 3**

MAX. MARKS: 80

UNIT I: 11 HOURS

- Principles of diet in diseases- objectives of diet therapy & role of dietitian.
- Therapeutic modification of normal diet, classification of diets according to nutrients.
- Critical care nutrition- types of feeding, enteral feeding, Parental- TPN, PPN.

UNIT II: 9 HOURS

- Etiology , Symptom, Dietary Management in:
 - Fevers, Typhoid & TB
 - GI diseases- Peptic ulcer, Constipation

UNIT III: 12 HOURS

- Etiology , Symptom, Dietary Management in:
 - Obesity, Underweight
 - Hypertension, CVD- atherosclerosis, Diabetes Mellitus.

UNIT IV: 13 HOURS

- Etiology, symptoms, dietary management in:
 - Renal disorders- nephritis, nephrotic syndrome, acute renal failure, chronic renal failure.
 - Liver disorders- infectious hepatitis, cirrhosis of liver.

REFERENCE BOOKS:

1. Sri Lakshmi.B – Dietetics, New Age International Publishers.
2. Antia FP. Clinical dietetics and Nutrition, 2nd Edition, Oxford University press, Delhi.
3. Swaminathan- Advance text book in Food & Nutrition Volume II, the Bangalore printing and publishing company.
4. Krause M, Kathleen. L Mahan and Sylvia Escott Stump, Food , Nutrition, & Diet Therapy, 11 edition WB saunders company, Philadelphia , 2004
5. Joshi AS. nutrition & Dietetics 2010, Tata Mc. Graw Hill.
6. Robinson C. H. Lawler M. R., Chenoweth W. L. & Garwick A E., Normal and therapeutic Nutrition, Mc Millan Publishing Company.

REFERENCE BOOKS:

1. Modern Nutrition In Health And Disease by Maurice E. Shils , Moshe Shike , A. Catharine Ross, Lippincott William and Wilkins publications
2. Sue Rodwell Williams, Nutrition and Diet therapy, Times Mirror/ Mosby, College Publishing st. Louis.
3. Kumud Khanna, text book of nutrition and dietetics, Phoenix publishing house, pvt, ltd. New Delhi
4. Guyton & Hall- text book of medical physiology, 9th edition, W.B saunders & co.
5. Burtis G., Davis J. and Martin S. Applied Nutrition and Diet Therapy, W.B. Saunders Co.

**B.SC. III YEAR PRACTICAL SYLLABUS
V - SEMESTER
DSC – I, PAPER – V
CLINICAL DIETETICS**

PERIODS: 30

MAX. MARKS: 25

NO. OF PERIODS: 24

I. Planning of diets & calculation of nutritive value of the following diets

- a) Routine hospital diets- clear, full fluid & soft diet.
- b) Diet for peptic ulcer-Soft & bland diet.
- c) Degenerative disease- DM, atherosclerosis, HTN.
- d) Renal disorder- Low sodium, moderate/low protein diet
- e) Liver disorder- jaundice & cirrhosis.

II. Preparation of diets- 4 practical sessions

B.SC. III YEAR
V – SEMESTER, DSE – I(E)
PAPER – VI
FOOD SAFETY AND QUALITY CONTROL

PERIODS: 45

MAX. MARKS: 80

NO. OF CREDITS: 4

UNIT I INTRODUCTION

- Food safety issues; physical, chemical and microbiological contaminants, bovine spongiform encephalopathy (BSE), genetically modified organisms and genetically modified foods.
- Food safety system.
- Definitions and terminology in Quality Management Systems.
- History of quality control and quality management.
- Quality management theories and their authors.

UNIT II PHYSICAL AND CHEMICAL CONTAMINANTS

- Metals, mineral (soil, engine oil, stones), plant (leaves, twigs, pods and skins), animal (hair, bone, excreta, blood, insects, larvae).
- Safety evaluation of food ingredients.
- Major pathways by which chemical residues and contaminants enter the food chain.
- Agrochemicals and veterinary drugs, packaging materials, process equipment and ingredient impurities.

UNIT III NATURAL TOXIC SUBSTANCES & ADDITIVES

- Mycotoxins
- Marine and Freshwater toxins (formally known as Phycotoxins)
- Plant toxins and toxic plants
- Toxic Mushrooms
- The nature, properties and function of various classes of food additives (colorants, flavours, sweeteners, thickening and gelling agents, and antioxidant preservatives).
- Radioactivity – residues as contaminants and residues from irradiation

UNIT IV FOOD SAFETY

- **Microbial food safety:** The significance of foodborne disease.
- Protozoa; *Cryptosporidium parvum*. Toxigenic fungi; mycotoxins of *Aspergillus*. Foodborne viruses; gastroenteritis viruses.
- **Control of Food Safety and Quality Management:** Protecting public health and eliminating risk. Farm to table strategy and animal traceability.
- Good Manufacturing Practices (GMPs); Hazard Analysis and Critical Control Point (HACCP) concept; Quality Management Systems: ISO 9000.

SUGGESTED BOOKS:

1. Jacob M., Safe Food Handling - A training guide for the Manager, WHO, Geneva.
2. Mudambi S.R., Rao S.M. and Rajagopal M.V. Food Science, New Age International Publishers.
3. Patil, P.V. Food Contamination and Safety, Aavishkar Publishers, Distributors, Jaipur, India.
4. Nicholas Johns, Managing Food Hygiene, Mac Millan Publishing Co.
5. Hobbs, B.C. and Gilbert R.J. Food Poisoning and Food Hygiene, The English Language, Book Society and Edward Arnold Publishers Ltd.

**B.SC. III YEAR PRACTICAL SYLLABUS
V – SEMESTER, DSE – I(A)
FOOD SAFETY AND QUALITY CONTROL
PAPER – VI**

PERIODS: 30

MAX. MARKS: 25

NO. OF CREDITS 2

- Examine and judge the appropriateness of packaging of food to ensure compliance with Indian laws for canned, bottled & tetra packs.
- Market survey of 3 processed product food (any 3) with respect to standards (nutritional labeling, certification etc.) to be able to judge the status of claims and misleading descriptions.

**B.SC. III YEAR
V - SEMESTER
DSE- I (B) PAPER – VI
FOOD HYGIENE AND SANITATION**

PERIODS: 45

MAX. MARKS: 80

UNIT I

12 HOURS

- Definition of Public Health, Hygiene, Social and preventive medicine, basic aspects of personal hygiene.
- Epidemiology methods, introduction to Analytical, Experimental and Descriptive methods, diseases transmission.

UNIT II

11 HOURS

- Food Borne Disorders:
 - Food borne infections- Typhoid, Para typhoid, cholera, infective hepatitis, amoebiasis
 - Food borne intoxications- Disorders caused by; Natural toxins, chemical toxins and
 - Microbiological toxins in food- Staphylococcal intoxication, Botulism, Clostridium perfringens, Mycotoxins.

UNIT III

10 HOURS

- Food handling and Public Health: Preventing food borne illness and the spread of communicable disease; Sanitation of food serving institution; environmental sanitation, hygiene in food handling and personal hygiene of food handler.
- Water- sources, Impurities- Principles of water purification- commercial and domestic.

UNIT IV

2 HOURS

- Food adulteration: common, adulterants, and health hazards. Food standards and food laws. National and International; PFA, FPO, FAO, MMPO, Agmark, Codex, FSSAI, HACCP, ISO Certification; Consumer guidance society, Consumer rights, Consumer court, Central facilities for assessing food adulteration, Role of food inspectors.

SUGGESTED BOOKS

1. Food hygiene & sanitation- Roday.S ,tataMcGraw hill publishing company ltd.
2. Food science- B.Srilakshmi.
3. MohiniSethi, catering management, New age international publishers.
4. Sri Lakshmi.B – Food science, New Age International Publishers.
5. Park K (2011). Park's Textbook of Preventive and Social Medicine, 21st EditionM/sBanarasidasBhanot Publishers, Jabalpur, India.

**B.SC. III YEAR PRACTICAL SYLLABUS
V - SEMESTER
DSE- I (B) PAPER – VI
FOOD HYGIENE AND SANITATION**

PERIODS: 30

MAX. MARKS: 25

NO. OF CREDITS: 2

- Identification of adulterants in various classes of food samples,
 - a) Cereals and pulses
 - b) Milk and milk products – milk, curd, khoa
 - c) Ghee and oil
 - d) Spices and condiments- chilli powder, turmeric, pepper, asafetida, dhania, salt, whole and powdered spices
 - e) Sugar, honey and jiggery, tea coffee and miscellaneous foods

- Determination of hardness of water by complex metric titration.

B.SC. III YEAR
VI – SEMESTER
SEC 4, PAPER –4
PATIENT COUNSELLING TECHNIQUES AND SKILLS

PERIODS: 30

MAX. MARKS: 40

NO. OF CREDITS: 2

UNIT I

15 HOURS

- Definition of counselling, counselor as role model
- Types of counselling - client centered counselling, Behavioral counselling, Directive and non-directive and eclectic counselling
- Areas of counselling- individual (personalized), family, group- children, adolescent and elderly

UNIT II

15HOURS

- Counselling skills for behavior change, developing behavior change strategies, problems in communication, resources and aids to counselling
- Test for nutrition status, nutrition diagnosis, intervention, patient education and counselling tips

REFERENCE BOOKS:

1. Kathy king and bridgetklawitter, nutrition therapy: advance counselling skills, 3rd edition, Lippincott Williams and wilkins.
2. Sylvia escott stump, nutrition and diagnosis- related care 6th edition, Lippincott Williams and wilkins. 2008
3. Krause M katherine. L Mahan & Sylvia Escott stump, food nutrition and diet therapy, 11 edition, WB saunders, Philadelphia 2004

B.SC. III YEAR
VI – SEMESTER
GE 2, PAPER –2
PERSPECTIVES OF FOOD SAFETY IN INDIA

PERIODS: 30

MAX. MARKS: 40

NO. OF CREDITS: 2

UNIT 1. FOOD SAFETY AND QUALITY CONTROL

- Selecting and purchasing food
- Understanding food labels
- Storing raw foods and cooked foods
- Definition of food adulteration and common adulterants present in food

UNIT 2. HYGIENE AND SANITATION

- Definition of hygiene and sanitation
- Personal hygiene of food Handler
- Techniques of washing hands
- Pest control and garbage disposal

REFERENCE:

1. The pink book –food smart by FSSAI

**B.SC. III YEAR
VI – SEMESTER
DSC – I (F), PAPER – VII
PUBLIC HEALTH**

PERIODS: 45

MAX. MARKS: 80

NO. OF CREDITS: 2

UNIT I

9 HOURS

- Health and Nutrition- education-definition, components, principles of health-education, methodology- individual, group and mass methods use of audio visual aids.

UNIT II

12 HOURS

- Medical entomology, Control of household pest with special reference to mosquito, housefly Environmental, chemical, biological and generic control.

UNIT III

12 HOURS

- Immunity - (i) Classification, specific and non-specific immunity
 - (ii) Immunoglobulins,
 - (iii) Cellular and hormonal, immune response
 - (iv) Immunization active and passive immunization schedule
 - (v) Immunizing agents,
 - (vi) Hazards of immunization.

UNIT IV

12 HOURS

- Primary health care system with special reference to Maternal and Child Health care
- Primary health system functioning in rural areas, health indicators-mortality(infant & maternal), morbidity, disability and various health organizations, Malaria and AIDs Control-NHP, WHO, UNICEF.

REFERENCE BOOKS:

1. Wadhwa A and Sharma S (2003). Nutrition in the Community-A Textbook. Elite Publishing House Pvt. Ltd. New Delhi.
2. Park K (2011). Park's Textbook of Preventive and Social Medicine, 21st Edition. M/sBanarasidasBhanot Publishers, Jabalpur, India.
3. Mahtab S. Bamji, KamalaKrishnaswamy and G.N.V. Brahmam, Human Nutrition 4th edition. Oxford and IBH Publishing Co., P. Ltd. New Delhi.
4. McLaren D.S .Nutrition in the Community, John Wiley and Sons.

B.SC. III YEAR PRACTICAL SYLLABUS

**VI – SEMESTER
DSC – I (F), PAPER – VII
PUBLIC HEALTH**

PERIODS: 30

MAX. MARKS: 25

NO. OF CREDITS: 2

- Preparation of 3 audio visual aids like Flashcard/PowerPoint, poster and models related to health and nutrition.
- Formulation and preparation of low cost nutritious recipe
- Field visit. Report writing on field visit.
- Practical exposure of nutritional assessment techniques:
Anthropometry-height, weight, BMI, skinfold thickness, Waist /Hip ratio

B.SC. III YEAR
VI – SEMESTER
DSE – I (F), PAPER – VIII
FOOD PRESERVATION

PERIODS: 45

MAX. MARKS: 80

NO. OF CREDITS: 4

UNIT I

10 HOURS

- Food Technology and its application, Role of Food technology in combating malnutrition in developed countries.
- Food spoilage and nutrient losses during storage- physical, chemical and microbial spoilage of foods, agents causing food spoilage.

UNIT II

11 HOURS

- Food Preservation- the importance and general principles of food preservation.
- Home scale methods of food preservation like drying, refrigeration, pickling, use of sugars.

Flow chart for:

- Mango pickle
- Jelly
- Amlakamurabba

UNIT III

12 HOURS

- Commercial methods of food preservation - Preservation by high temperature- Canning, low temperature-Freezing, dehydration-(Sun drying, spray drying, foam mat drying). Concentration- Vacuum drying, radiation, chemicals and use of preservatives.

UNIT IV

12 HOURS

- Enhancement of nutritional value of foods by food fortification – double fortified salt, enrichment, substitution, supplementation.
- Novel protein foods-Leaf protein, chlorella, spirulina, Noni fruit, Garcinia cambogia.
- Loss of nutrients during processing and enhancement techniques.

REFERENCE BOOKS

1. ManoranjanKalia and SangitaSood, Food Preservation and Processing, Kalyani Publishers, NewDelhi.
2. Sri Lakshmi B. Food Science, New Age International P. Ltd. Publishers.
3. Norman N. Potter, Joseph H. &Hotchleiss, Food Science, CBS Publishers and Distributors.
4. N. ShankuntalaManay and M. Shadaksharaswamy, Food Facts and Principles, New Age International Publishers.
5. Mudambi S.R., Rao S.M. and Rajagopal M.V. Food Science, New Age International Publishers

**B.SC. III YEAR PRACTICAL SYLLABUS
VI – SEMESTER, DSE – I(E)
FOOD PRESERVATION
PAPER – VIII**

PERIODS: 30

MAX. MARKS: 25

NO. OF CREDITS: 2

Food Processing and Preservation

- Preparation of jams (3-4 varieties)
- Preparation of jellies (2 varieties)
- Preparation of sauces, tomato ketchup, chilli sauce and tamarind,dry ginger sauce.
- Preparation of squashes (3-4 varieties)
- Preparation of pickles (3-4 varieties)
- Preparation of sun dried fruits and vegetable products.(Raisin, figs, ashgourd, banana chips)

B.SC. III YEAR
VI – SEMESTER
DSE – I (F), PAPER – VIII
ADVANCE DIETETICS

PERIODS: 45

MAX. MARKS: 80

NO. OF CREDITS: 4

UNIT I

15 HOURS

- Pre & post operative care.
- Nutritional assessment of critically ill patients.

UNIT II

13 HOURS

- Diet in gastritis: symptoms of gastritis
- Diet in disturbance of small intestine & colon: spruce, celiac disease, & disaccharide intolerance- symptoms & dietary management
- Diet in diseases of gall bladder & pancreas- etiology, symptoms & dietary management of hepatic coma, cholecystitis & pancreatitis.

UNIT III

15 HOURS

- Cancer- definition, cancer therapy, & dietary management of cancer patients.
- Hyperlipidemia & congestive heart failure: symptoms & dietary management.
- Burns: degree of burns, fluid & electrolyte replacement & dietary management.

UNIT IV

12 HOURS

- Diet in renal disorders: causes, symptoms & dietary treatment in ARF, CRF. Types of dialysis, Renal calculi- types & dietary management.
- Gout: causes, symptoms & diet

REFERENCE BOOKS:

1. Sri Lakshmi.B – Dietetics, New Age International Publishers.
2. Antia FP. Clinical dietetics and Nutrition, 2nd Edition, Oxford University press, Delhi.
3. Swaminathan- Advance text book in Food & Nutrition Volume II, the Bangalore printing and publishing company.
4. Krause M, Kathleen. L Mahan and Sylvia Escott Stump, Food , Nutrition, & Diet Therapy, 11 edition WB saunders company, Philadelphia , 2004
5. Joshi AS. nutrition & Dietetics 2010, Tata Mc. Graw Hill.

6. Robinson C. H. Lawler M. R., Chenoweth W. L. & Garwick A. E., Normal and therapeutic Nutrition, Mc Millan Publishing Company.

REFERENCE BOOKS:

1. Modern Nutrition In Health And Disease by Maurice E. Shils , Moshe Shike , A. Catharine Ross, lippincott William and wilkins publications
2. Sue Rodwell Williams, Nutrition and Diet therapy, times Mirror/ Mosby, College Publishing st. Louis.
3. Kumud Khanna, text book of nutrition and dietetics, phoenix publishing house, pvt, ltd. New Delhi
4. Guyton & Hall- text book of medical physiology, 9th edition, W.B saunders & co.
5. Burtis G., Davis J. and Martin S. Applied Nutrition and Diet Therapy, W.B. Saunders Co.

B.SC. III YEAR, PRACTICAL SYLLABUS

**VI – SEMESTER
DSE – I (F), PAPER – VIII
ADVANCE DIETETICS**

PERIODS: 30

MAX. MARKS: 25

NO. OF CREDITS:2

- Planning and preparation of diets for Hyperlipidemia.
- Planning and preparation of diets for Congestive Heart Failure.
- Planning and preparation of diets for Acute Renal failure and Chronic Renal failure.
- Planning and preparation of diets for patients with chronic renal failure undergoing Dialysis.
- Planning and preparation of diets for Renal calculi.
- Planning and preparation of diets for Surgery