

**Govt. M.H. College of Home Science &
Science for Women (Autonomous)
Jabalpur, M.P.**



SYLLABUS: 2023-24

**PG DIPLOMA NUTRITION AND
DIETETICS**

**Department of
Food & Nutrition**

**Govt. M.H. College of Home Science and Science for Women,
Jabalpur, M.P.**



Principal

Tel No.0761-4005716 ,2407326

Fax No. 0761-4005716

Email: principal@gmhcollege.nic.in

Letter No: UGCMH/

Dated:

CONSTITUTION OF BOARD OF STUDIES

Composition of Board of Studies: **P.G. Diploma Nutrition & Dietetics.**

1. Dean and Chairman : **Dr. Nandita Sarkar**
2. Head of the Department Chairman **Dr. Smita Pathak** *Smita Pathak*
3. Course co-ordinator - **Mrs. Vishwashanti Parashar**
4. Faculty members of the Department
Of Food & Nutrition
 1. **Mrs. Vibha Shripal**
 2. **Mrs. Apoorva Soni** *ASoni*
5. Two subject experts from outside the Parent University to be nominated by the Academic Council
 - i) **Dr. Archana Gupta** Govt. Girls P.G.College, Rewa
 - ii) **Dr. Meeta Badal**, Babulal Gour Govt. P.G. College, BHEL, Bhopal
6. One expert to be nominated by the Vice Chancellor from a panel of six recommended by the college principal
 - i) **Dr. Meera Vaidya (Retd Professor)**
7. One representative from industry/corporate sector/allied area relating to placement.
 - i) **Dr. Manik Pansey**, Director Anant Hospital Jabalpur

Manik Pansey

8. One postgraduate meritorious alumnus to be nominated by the principal.

i) **Mrs. Rupal Jain**

9. The Chairman, Board of Studies, may with the approval of the principal of the college, co-opt:

i) **Dr. Anubha Upadhyay** JNKVV, Jabalpur

Upadhyay

(a) Experts from outside the college whenever special course of studies are to be formulated.

i) **Dr. Sheela Pandey**, JNKVV, Jabalpur

Pandey

(b) Other members of staff of the same faculty

i) **Dr. Bhawana Sharma**, HOD, Textile Department

B Sharma

Term : The term of the nominated members shall be of three years.

Meetings : The Board of Studies shall meet at least twice a year.

Academic Council
Approved

PRINCIPAL
Govt.M.H.College
of Home Science
& science, Jabalpur

Govt. M.H. College of Home Science & Science For Women,
Jabalpur (M.P.)



Principal

Tel No. 0761-4005716,2407326

Email:principal@gmbcollege.nic.in

Fax No. 0761- 4005716

Letter No.UGC/MH/

Jabalpur, Dated:

CONSTITUTION OF BOARD OF STUDIES

The board of Studies of Food & Nutrition has been constituted as per the revised guideline of UGC (XII Plan). The term of the members shall be for two years.

- Composition of Board of Studies :
1. Dean and Chairman :
 2. Head of the Department :
 3. Senior Faculty member of the Department :
Clinical Nutrition
Dr. Nandita Sarkar
Dr. Smita Pathak *Sathak*
Mrs. Vishwashanti Parashar
 4. Faculty members of the Department of Food & Nutrition: 1. **Mrs. Vibha Shripal**
2. **Mrs. Apoorva Soni** *Asoni*
 5. Two subject experts from outside the Parent University to be nominated by the Academic Council
i) **Dr. Archana Gupta** Govt. Girls P.G.College, Rewa
ii) **Dr. Meeta Badal**, Babulal Gour Govt. P.G. College, BHEL, Bhopal
 6. One Expert to be nominated by the Vice Chancellor from panel of six recommended by the college principal-i) **Dr. Meera Vaidya (Retd Professor)**
 7. One representative from industry/ corporate sector/ allied area relating to placement-
i) **Dr. Manik Pansey**, Director Anant Hospital Jabalpur *Mansey*
 8. One Postgraduate meritorious alumnus to be nominated by the principal. The Chairman, Board of Studies, may with the approval of the principal of the college, co-opt-
i) **Mrs. Rupal Jain**
(a) Experts from outside the college whenever special course of studies are to be formulated-
Dr. Sheela Pandey, JNKVV, Jabalpur *Pandey* *clothing &*
(b) Other members of staff of the same faculty- i **Dr. Bhawana Sharma**, HOD, Textile Department *Bhew*
Govt. M.H. College of Home Science & Science for Women, Jabalpur.

Academic Council
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Dr. Nidhi Choubey
In-Charge UGC(Meetings)

Sathak
HOD

Dr. Nandita Sarkar
Principal

**Post Graduate Diploma
Nutrition & Dietetics
Year 2023-24**

**Duration:- One year course including job training for three month in
Hospital and Institution.**

Workload

S.No.	Subject	Theory (Classes/Week)	Practical (Classes/Week)	Total (Classes/Week)
1	PHYSIOLOGY	06		06
2	BIOCHEMISTRY & MICROBIOLOGY	06		06
3	BASIC & NORMAL NUTRITION	06		06
4	DIET THERAPY	06		06
5	FOOD SERVICE MANAGEMENT	06		06
6	PUBLIC NUTRITION	06		06
7	PRACTICAL -1		08	08
8	PRACTICAL - 2		08	08
9	JOB TRAINING			3 MONTHS

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SCHEME OF EXAMINATION

FOR P.G. DIPLOMA IN NUTRITION & DIETITICS

S.No.	Subject	Theory (Classes/Week)	Practical (Classes/Week)	Total (Classes/Week)
1	PHYSIOLOGY	100		100
2	BIOCHEMISTRY & MICROBIOLOGY	100		100
3	BASIC & NORMAL NUTRITION	100		100
4	DIET THERAPY	100		100
5	FOOD SERVICE MANAGEMENT	100		100
6	PUBLIC NUTRITION	100		100
7	PRACTICAL -1		100	100
8	PRACTICAL - 2		100	100
9	JOB TRAINING 3 MONTHS			200

1. This diploma is affiliated to Rani Durgavati Vishwavidyalaya Jabalpur.
2. The lectures will be conducted by members of Food & Nutrition department and guest faculties.
3. Rules are according to autonomous examination.
4. In each subjects (Theory and/practical) the minimum passing marks will be 40%.
5. 75% attendance is compulsory.

K. P. Singh

S. P. Singh

B. Singh

A. Singh

S. Pandey

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Proposed Syllabus
Post graduate diploma in Nutrition and dietetics
Subject – PHYSIOLOGY

Paper I

M.M.:100

UNIT I

General principle of physiology.

The Muscular System – General Account – types of muscles, characteristics of each, Similarities and Differences.

Blood and Circulatory System – Blood and its composition, Functions of each constituent of blood, Blood groups, Blood transfusion and its importance, Coagulation of Blood, Blood vessels, Structure and functions of heart, Blood pressure, heart rate, Cardiac output and their regulation cardiac cycle, ECG,.

Lymphatic System – Lymph, Lymph glands and functions, Spleen – Structure and Functions.

UNIT II

Respiratory System - Organs, Structure and Functions, Mechanism of Respiration, tissue respiration.

Digestive System -Structure and Functions of Alimentary tract. Functions of various secretions and juices – Saliva, Gastric, Bile, Intestinal, Pancreatic. Functions of enzymes in digestion. Digestion of nutrients – Proteins, Fats, Carbohydrates.

UNIT III

Excretory System - Structure and Functions of (a) Kidney (b) Ureter (c) Bladder (d) Skin. Urine – Formation of urine, Composition of normal and abnormal urine.

Nervous System – Structure of nerve Cell, Fibre, Synapse, Classification of Nervous System,

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Central Nervous System – Brain, Cerebrum, Cerebellum, Medulla oblongata, Hypothalamus. -, Spinal Cord – structure and functions, Peripheral Nervous System, and Autonomic Nervous System.

UNIT IV

Reproductive System – **Female** reproductive system – organs, structure and functions Male reproductive system – structure and functions, Menstruation, menstrual cycle, Puberty, Menarche, Menopause, Fertilization of ovum, Conception, Implantation.

UNIT V

Sense Organs – Eye – structure and function, and defects of vision

Ear – structure and function, mechanism of hearing,

Skin – structure and function

References:

- Essentials of Medical Physiology – K Sembulingam, Prem Sembulingam
- Human Physiology – IGNOU textbook.
- Textbook of physiology – Garrows.
- Human Physiology –C.C. Chatterjee VOL I &II.
- Human Physiology – Gyton.
- Physiology – Best & Taylor.

M. Anand

S. P. Sharma

P. Sharma

S. Pandey

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Proposed syllabus
Post graduate diploma in Nutrition and Dietetics
SUBJECT- BIOCHEMISTRY & MICROBIOLOGY

Paper II

M.M.:100

UNIT - I

Carbohydrate metabolism

Cellular metabolism = Glycolysis & its regulation, Kreb's cycle & its regulation, glycogen metabolism (glycogenolysis & glycogenesis), Hypoglycemia & loss of consciousness (Hypoglycemic shock). Hyperglycemia

Lipid metabolism

B- Oxidation of fatty acid, Fate of acetyl units

Ketone bodies - production & Ketosis, Phospholipids, Biochemical importance of Phospholipids.

Lipoprotein - type & their biochemical importance, Good cholesterol, Bad cholesterol Dyslipidemia.

UNIT - II

Protein metabolism

Amino acid pool

Oxidative deamination, ammonia toxicity, Transamination

Biochemical importance of SGPT, SGOT,

Urea cycle

Nucleic acid metabolism

Purine - metabolism - biochemical importance

Pyrimidine - metabolism - biochemical importance

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UNIT-III

1. (a) Biological oxidation

Electron transport Chain (respiratory chain), Oxidative phosphorylation, Synthesis of ATPs & Chemi Osmotic Coupling

(b) Detoxification of xenobiotics.

Oxidation, reduction, hydrolysis

Conjugation reaction, detoxification of cyanides

2. (a) Hormone – Types and function

(b). Enzyme in clinical diagnosis

UNIT – IV

Microbiology-

1. Introduction to microbiology & historical development of microbiology.

Life – General morphology of Micro – Organism – general

Characteristics of bacteria, fungi, virus, protozoa, algae.

2. Control of micro-Organism-growth curve- Effect of

environment factors on growth of micro-organism- pH

Water activity – oxygen availability, temperature, & others.

3. Microbiology of different foods-Spoilage and Contamination, Sources, types, effects on the following:

- Cereals & cereal products.
- Sugar & sugar products.
- Vegetables & fruits
- D) Meat & meat products.
- Fish & other sea foods.

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- Eggs & poultry.
 - Milk & milk products.
 - Canned food.
4. Beneficial effect of micro-organism.
Effects of micro-organisms on food degradation and
Food borne illnesses – bacteria, virus, molds, yeasts and Parasites.
 5. Other food hazards – chemicals, antibiotics, hormones, metal
Contamination, poisonous foods.
 6. Food contamination – sources and transmission water, air,
Sewage and soil as reservoir of infection and ways of spread.

UNIT -V

1. Importance of personal hygiene of food handler-habits-clothes.
Illness education of food handler in handling and serving food.
2. Safety in food procurement, storage, handling and preparation
Control of spoilage - safety of left over foods.
3. **Cleaning methods** –sterilization and disinfection
4. **Waste products handling** –
Planning for waste disposal.
Solid wastes and liquid wastes.

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M. Paulley

W. Paulley

B. Shewe

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Post graduate diploma in Nutrition and Dietetics
SUBJECT – BASIC & NORMAL NUTRITION

Paper III

M.M.:100

UNIT - I

- Introduction to nutrition foods as a source of nutrition, function of food, definition of nutrition, nutrition, adequate, optimum and good nutrition, malnutrition.
- **Energy**, unit of energy, food a source of energy, energy value of food. The body's need for energy B.M.R. activities, for utilization of food to fat energy requirement.
- **Carbohydrates** composition. Classification, food sources, function, storage in the body.
- **Fat & oils** composition. Saturated, unsaturated, fatty acids, classification food source, function or fats.
- **Protein** composition, sources, essential, non-essential amino acids, source of proteins function, protein deficiency (in brief).

UNIT – II

- **Vitamins** Source, functions & deficiency of fat & water soluble vitamins (in brief).
- **Minerals** - functions, sources, bioavailability and deficiency of following minerals calcium, iron, iodine, fluorine, sodium, potassium (in brief).

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UNIT- III

- **Cereal & millets** breakfast cereals, cereal products fast foods structure. Processing, use in variety, storage, nutritional aspects & cost. (in brief).
- **Pulses & legumes** production (in brief) selection & variety of preparation nutritional aspects & cost.
- **Vegetable & Fruits** Variety, selection purchase, storage availability, cost uses & nutritional aspect of Raw & processed vegetables & fruits. (in brief).
- **Milk & Milk products** Composition, classification, quality processing, storage spoilage uses cost, nutritional aspect of milkcurds butter milk, paner khoa, cheese, ice-crème, kulfi & various kind of processes milk. (in brief).
- **Eggs** Structure&Composition, Production, grade, quality, selection, storage, spoilage, uses, cost & nutritional aspects.
- **Fish, poultry & meat (in brief)**. Selection, purchasestorage, uses, cost & nutritional aspect spoilage of fish poultry & meat.

UNIT - IV

- **Basic principal of meal planning** – objectives/of meal planning, food cost. Factors affective meal planning.
- Nutrition in pregnancy – nutritional requirements – food selection. Complication of pregnancy Physiological changes during pregnancy.
- Nutrition during lactation – Physiology of lactation – Nutritional requirement. Food/taboo during lactation, galactogogues.

M. Prasad
P. S. Reddy
B. S. Reddy

S. Prasad Academic Council
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- Nutrition during Adolescence growth & nutrients needs-food likes & dislikes, factors influencing food habits, and underweight.

UNIT- V

- Nutrition during early childhood (Toddler/preschool) growth & nutrients needs nutrition related problem, feeding pattern Nutrition of school going children-nutritional requirement, importance of snacks & school lunch/Tiffin's.
- Geriatric Nutrition factor affecting food intake & nutrient needs, nutritional related problems, Physiological change during old age.
- Nutrition during infancy growth & development – Nutritional requirements- breast feeding, infant formula, colostrums its importance, introduction of supplementary foods.
- Breast feeding & its implications hazards of bottle – feeding.
- Weaning, food planning, formulating & preparing feeds, Importance of correct & timely weaning.

REFERENCE

1. Arora K.& K.V. Gupta – Theory of Cookery.
2. Lavies, B. Food Commodities – London, Heinemann LTD 1988.
3. Iluges O. Introductory Foods, Macmillan, & Co. New York.
4. Pyke. M. Catering Service & Technology, London John Murray Pull: 1974.
5. Dowell P & A Bailey – The Book Of Ingredients, Dorling KinderleyLts, London 1980.
6. Guthrie, Hele, Andrews, Introductory Nutrition. 6th Ed. St. Louis, imes Mirror Mosby College, 1988.

M. Pal
B. S. Kumar

Stanley

7. Mudambi S.R., M.V. Rajgopal, Fundamentals of Food & Nutrition (2nd Ed.) Wiley Eastern Ltd. 1980
8. Swaminathan S.: Advance Book On Foods Nutrition Vol. I, II (2nd Ed. Revised & Enlarged) B.App C 1985
9. Willson, EV AD Principales of Nutriton, 4th Ed. New York John Willey & Sons 1979.

M. Pandey / Sharma
B. Sharma

S. Pandey

Proposed syllabus
Post graduate diploma in Nutrition and Dietetics
SUBJECT – DIET THERAPY

Paper IV

M.M.:100

UNIT – I

A. Role of dietitian

- Responsibilities of nutritional counselor.
- Communication of dietary advice, skills of communication.
- Motivating of patients.
- Teaching and used in dietary advice.

B. Principles of nutritional care

(i) Nutritional care process

- Assessment
- Objectives of nutritional care
- Implementation of nutritional care
- Implementation of nutritional care
- Evaluation of nutritional care.

(ii) Nutritional Intervention – Diet Modifications

(1) Adequate normal diet as a basis for therapeutic diets

- Diet Prescription
- Modification of Normal Diet
- Nomenclature of Diet Adequacy of Standard Hospital Diets
- Psychological factor in feeding the sick person

(2) Effect of food, nutrients and nutritional status on drug dosage and efficiency.

M. Paul
B. Shrivastava

A. Pandey

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UNIT - II

Modes of feeding

External – tube feeding

Parenteral (i) Peripheral vein feeding (ii) Total parenteral nutrition

(A) Overweight and obesity

- Definition
- Classification
- Assessment

Causes, Physiology of obesity, mathematics of weight reduction.

Dietary management and caloric restriction plans

Exercise

Other approaches of weight reduction.

(B) **Underweight**

- Definition
- Criterion
- Etiology
- Treatment
- High caloric diet

(A) **Diseases of gastro intestinal tract causes, Pathogenesis, Symptoms and Dietary management of:**

(1) **Diseases of esophagus**

- Achalasia
- Oesophagitis

(2) **Disease of stomach**

- Indigestion
- Gastritis
- Peptic ulcer
- Esophagitis

starg

nausea / stomach

(3) Disease of intestine

- Constipation
- Diarrhoea
- Hemorrhoids
- Steatorrhoea

(4) Inflammatory disease Syndrome

- Diverticular disease
- Ulcerative Colitis

(5) Malabsorption Syndrome

- Sprue
- G-IT enzyme deficiency

UNIT – III

**1. Diseases of liver exocrine pancreas and biliary system: physiology
Etiology Pathogenesis, Symptoms and Management**

- Physiology of liver
 - Diet and liver
- (i) Liver diseases
- Cirrhosis
 - Viral hepatitis
 - Hepatic coma
 - Wilson's disease
- (ii) Disorder related to gall bladder
- Cholecystitis
 - Gall stones
- (iii) Disorder related to pancreas
- Pancreatitis

(2) Nutritional care in Cardio-vascular disorders.

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(i) **Hypertension-**

- Definition
- Criterion
- Types
- Causes
- Nutritional Management
- Drugs.

(ii) **Hyperlipidemia**

- Lipo-Protein and their metabolism
- Classification of hyperlipidemia
- Clinical and Nutritional aspect of hyperlipidemia.
- Dietary Care

(iii) **Coronary Heart Disease (CHD)**

(a) **Atherosclerosis-**

- Etiology
- Pathogenesis
- (b) Risk factors associated with CHD
- (c) Management of CHD
- Dietary Management
- Exercise
- (d) Prevention of CHD

(3) **Infection and fever**

(b) Metabolism, effect on body mechanism and classification

Etiology, Pathology symptoms and treatment of a

Acute fever – typhoid

Chronic fever – TB

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P. Anand

S. Pandey

B. Shrivastava

UNIT-IV

(A) Diet in Disease of endocrine pancreas

- Etiology
- Classification
- Symptoms and diagnosis
- Management clinical vs. Chemical control
- Insulin Therapy
- Oral hypoglycemic drugs
- Glucose monitoring at home
- Dietary care with and without insulin
- Specific Diabetic food
- Sweetness and sugar substitutes
- Diabetic coma
- Insulin reaction

Patient education

(I) Hypoglycemia

- Symptoms
 - Types
- I. Reactive Hypoglycemia
 - II. Idiopathic Hypoglycemia

Dietary treatment

(B) Surgery

1. Pre operation nutritional care
 2. Post operative nutritional care
- Gastric surgery
 - Colon surgery
 - Tonsil surgery
 - Esophagus surgery

(C) Burn

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- Fluid and electrolyte replacement
- Nutritional care
- Rehabilitation

UNIT – V

(A) **Nutritional care for patient with disease of Kidney –**

(B) Review of physiology and function of normal kidney

(a) Nephritis

- Classification
- Etiology
- Characteristics
- Nutritional care and management

(b) **Nephrotic syndrome**

- Etiology
- Characteristics
- Nutritional care and management

(c) **Acute and Chronic renal failure**

- Etiology
- Types
- Nutritional care and management

(C) **Cancer**

- Dietary factor and cancer causation
- Cancers treatment: Radio therapy, surgery and chemotherapy
- Alternative or complementary diets
- Prevention

M. Pandey

V. Pathak

S. Pandey

B. Kumar

REFERENCES:

1. Anderson L., M.V. Dibble, P.R. Turkki, H.S. Mitchell and H.J. Rynbergen Nutrition in Health and Disease, 17th ed., J.B. Lippincott Co., Philadelphia, 1982.
2. Antia F.P.: Clinical Dietetics and Nutrition, 3rd ed., Oxford University, Press, Delhi, Reprinted in 1989.
3. Bennion M.: Clinical Nutrition, Harper and Row Pub. New York, 1979.
4. Frances, D. E. M.: Diets for sick children, Blankwell Scientific, Publications, 1974.
5. Hui, Y.H.: Human Nutrition and Diet Therapy, Wadsworth Health ScLDivs. 1983.
6. Karran, S.J. and K.G.M.M. Alberti (ed): Practical Nutritional Support, John Wiley and Sons. Inc. N.Y. 1980.
7. Krus M.V. and L.K. Madan: Food , Nutrition and Therapy, W.B. Saunders Company, London, 1984.
8. Lois, J and C.M. Peterson (ed): Nutrition and Diabetes, Alan R. Liss, Inc. N.Y., 1985.
9. Passemore R. and M.A. Eastwood: Human Nutrition and Dietetics, 8th ed. ELBS, Churchill Livingstone, 1986.
10. Robinson, C.H, M.R. Lawlwr, W.L. Chenoweth and A.E. Garwick: Normal and Therapeutic Nutrition, 17th ed;, Mac Millan Pub. Co.
11. Suitor, Coo Woo and Moo F.. Hunter: Nutrition, Principals and Application in Health Promotion, J.. Boo Lippincott Co.. Philadelphia, 1980.
12. Whitney, E. N. and C.B..Cataldo: Understanding Normal and Clinical Nutrition, West Pub. S1. Paul, 1983.
13. Willims, S.. R.: Nutrition and Diet Therapy, 4th ed., C.V. Mosby Co., S1. Louis, 1981.
14. Willims, S.. R.: Essentials of Nutrition and Diet Therapy, 4th ed., Mosby College Pub. S. Louis, 1986.
15. Thomas, B.: Manual of Dietetic Practice, 1996.
16. ASPEN; Nutrition Support, Dietetics.

S. Pandey

M. Paul
W. D. D. D.
B. S. H. H.

Proposed syllabus

Post graduate diploma in Nutrition and Dietetics

SUBJECT – FOOD SERVICE MANAGEMENT

Paper V

M.M.:100

UNIT I

Organization and Management

- Definition and Types of Organisation
- Objectives of different food service Organisation as (a).Industrial (b) Institutional (c). Hospital
- **Tools of Management** - Definition and Function, Tangible Tools: Organisation Chart, Job Description, Job Specification, Job Analysis & Work Schedule.
- Intangible Tools: Inherited and acquired personal qualities

UNIT II

- **Management of Resources:** Time, Energy, Space-Layout of plant and work areas and Finance-Balance sheet,
- **Menu Planning:** Functions and Types of Menus, Factors affecting Menu Planning, Menu pricing Methods
- **Food Material Management:**Purchasing –Procurement, Products Selection, Specifications, Methods of Purchasing, Purchase Process
- Receiving, Storage-Dry and low temperature and Inventory-Issuing Products, Inventory Records &Inventory Control tools

M. Prasad

Y. Raju

B. S. Renu

S. Pandey

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UNIT III

- **Types of Food Services:** Conventional, Commissary, Ready to eat and Assembly/Serve Food Service
- **Equipments** – Catering equipments-Classification and selection, Care and Maintenance of Equipment.
- Hygiene and Sanitation-Environmental, Personnel, Food Handling Practices and Customer's role
- Pest control, Garbage Disposal
- Safety, Security, Ventilation and lighting

UNIT IV

- **Personnel Management:** Recruitment, Selection and training of personnel, work standards, Supervision, Performance Appraisal, Motivation, Incentives for effective Performance.
- Labour Laws and Legislations

UNIT V

- Principal & advantages of Book-Keeping
- **Journal** – Sources of journal- Bill cash memos, vouchers, transaction & journal entry
- **Ledger** – Indexing, classification of ledger.
- **Cash Book**- recording, transaction, balance & pasting.
- **Trail balance** – Profit & loss account
- **Balance sheet preparation** – net profit & gross profit concept, assets & liabilities.
- **Ratio analysis** – 1. Gross profit ratio 2. Current ratio 3. Property
- **Cost Classification**- Marginal Costing
- Break even analysis, Break even point profit/volume ration.

M. Pandey

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B. Sharma

S. Pandey

Proposed syllabus

Post graduate diploma in Nutrition and Dietetics

SUBJECT – PUBLIC NUTRITION

M.M.:100

Paper VI

UNIT I

1. Concept of Public Nutrition
2. Definition and concepts of health. Determinants of Health
3. Relationship with health and nutrition.
4. Role public nutritionists the health care delivery.
5. Population dynamics: Demographic transition population structures fertility behavior. Nutrition and quality of life.

UNIT II

A. Assessment of Nutritional status.

- Anthropometry
- Biochemical
- Clinical
- Dietary

B. **Nutrition Indicators** – Functional indicators such as grip strength respiratory fitness Harvard step test, squatting test

UNIT III

National Food and Nutrition Policy, Plan of Action

- Sectors and public relevant to nutrition – National
- And International organization of nutrition. Specific community
- Nutrition programmes in India. Case studies of selected strategies
- And programmes.

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UNIT IV

1. Approaches and strategies for improving nutritional status.

- Programmable Option: Health and nutrition based interventions, supplementary feeding, fortification and genetic improvement of foods.
- Merits and demerits of these options.
- Factors in feasibility of these programmes i.e. political support. Available resource (human infrastructural, financial)

2. Nutrition Education

- Definition, purpose, importance
- Methods and tools
- Channels of nutrition educations
- Evaluation of nutrition education

UNIT V

1. Public Health Administration

A. Central and state health organization

B. Primary Health Care in India

- Elements of Primary Health Care
- Principal of Primary Health Care
- Primary-Health Care of village level sub centre level and primary health centre level, community health centres.

C. Health Care Systems.

M. Paul
P. Sharma

P. Sharma

S. Pandey

REFERENCES

1. Owen, A.V. and Frankle R.T. (1986) Nutrition in the community. The Art of Delivering Services, 2nd Edition-Time Mirror.
2. Paris KL (2000) Park's Textbook of Preventive and Social Medicine, 18th Edition M/s BanarasidasBhanat, Jabalpur.
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4. State of the World's Children. UNICEF
5. Census Reports
6. Berg A (1973): The Nutrition Factor the Brooking Institution. Washington.
7. Geaton G.H. and Bengoa. J.M. (Eds.) (1986): Nutrition in Preventive Medicine WHO.
8. Bamji M.S. Rao, P.N. Reddy, V. (Eds.) Textbook of Human Nutrition, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
9. Gopalan, C, and Kaur, S (Eds)(1993) Towards Better Nutrition, Problems and Policies, Nutrition foundation of India.
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11. Gopalan, C.(Ed) (1987) Combating Under nutrition – Basic Issues and Practical Approaches, Nutrition Foundation of India.
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National Family Health Survey I & III (1993-2000) International Institute for Population Studies Mumbai.
13. National Plan of Action of Nutrition Board, Dept. of WCD Govt. of India.
14. National Nutrition Public (1993) WCD, Govt. of India.
15. National Education for the Public (1940: FAO Food and Nutrition Pager 62 FAO)

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Admn
B. S. Rao

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16. Allan, L. and Ahiuwalia N. (1997) Improving Iron Status through Dist. Application of Knowledge correcting Dietary Iron Bio availability in Human Population OMNI/US AID Arlington, VA USA.
17. Nestal, P. (ed.) (1995) Proceeding: Interventions for Child Survival OMNI/USAID Arlington, VA USA.
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Handwritten signatures:
 M. Paul...
 B. Sheno...

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 Stanley

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M. Prasad
S. Prasad
B. Prasad

Stanley

Practical – I

Normal & Therapeutic Nutrition

Objectives:

Credits : 4

The Course aim to develop Standards of dietetic practice consistent with the expanding data base and advancement in the field of dietetics.

1. Market survey of commercially available polymeric mixture, elemental diet, enteral and parenteral feeds.
2. Standardization of Portion sizes for different food Preparations.
3. Preparation of normal diets generally served in a hospital. Modifications in consistency and fiber.
 - a) Different types of liquid diets.
 - b) Different types of semisolid soft diets-General, Mechanical and pureed.
 - c) Blank Diets
 - d) Low fiber diets
 - e) Low Residue diets
 - f) High fiber diets
 - g) Low Sodium diets
4. **Energy diets**
 - a) Low caloric diets
 - b) Adult weight reduction
 - c) High calories and Protein diets for under weight, Over weight, Fevers
5. Diet for GIT (Peptic ulcer, Constipation, Diarrhea), Liver, Cardiovascular, Kidney
 - a) **Low Protein diets**– Hepatic Encephalopathy
6. Diet for IDDM and NIDDM.

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Practical – II

1. Display of diet counseling center.
2. Preparation of counseling aids.
3. Report of the live objects (**minimum 50**).
4. **Interpretation of the following -:**
 - a. Clotting time
 - b. Bleeding time
 - c. Hemoglobin
 - d. Blood group
 - e. **Blood analysis -:** Sugar, Glucose tolerance test, Serum Vitamins, Iron Hemoglobin & TIBC
 - f. Enzymes of clinical signature -: SGPT, SGOT, LDH acid & alkaline Phosphates
 - g. Total Protein, albumin & globulin ration, blood urea Nitrogen, Liver function test -: Bilirubin
 - h. Renal function test -: Urea & Creatinine clearance test.
 - i. Lipid profile -: Cholesterol, Serum triglycerides, Lipoprotein
 - j. Blood Pressure -: Before, during and after exercise.

K. Paul
Prabhu

Stanley

B. Sheno.