

CLINICAL AND THERAPEUTIC NUTRITION –I

Sem	Subject Code	Category	Lecture		Theory		Practical	Credits
I	21CPFN1B	Core Paper II	Hrs/sem	Hrs/Per week	Hrs/sem	Hrs/Per week	-----	4
			90	6	90	6		

COURSE OBJECTIVES

To enable the students to-

1. Impart basic knowledge in the field of dietetics.
2. Develop capacity and aptitude for taking up dietetics as a profession.
3. Study the aetiology, symptoms and medical nutrition therapy in various diseases
4. Understand and learn the principles of diet and nutrient modifications for various diseases.

COURSE OUTCOMES

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	Introduction to Clinical and Therapeutic Nutrition	K2
CO2	Mechanism of Nutritional care and its importance	K3, K4
CO3	Nutritional management in Gastro Intestinal Diseases	K3, K4
CO4	Nutritional management in Weight Imbalance	K3, K4
CO5	Nutritional management in Allergy, Nervous System and Bone health disorders	K3,K4

Knowledge level: K1 – Remember, K2-Understand, K3- Apply, K4-Analyse.

MAPPING WITH PO

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	S	S
CO2	S	S	S	S	S	S
CO3	S	S	S	S	S	S
CO4	S	S	S	S	S	S
CO5	S	S	S	S	S	S

S-Strong; M-Medium, L- Low

UNIT I

18 Hours

INTRODUCTION TO CLINICAL AND THERAPEUTIC NUTRITION

- A. Definition and history of dietetics, Dietitian as part of the Medical Team:** - Types of dietitian and their role. **Nutritional Screening and care:** - Nutritional Assessment, Diagnosis, Intervention and evaluation. **Nutrient and Drug Interaction:** - Effect and Interaction of foods, nutrients and nutritional status on drugs.
- B. Basic concepts of Diet Therapy- Routine hospital diets:** - regular diets, clear fluid diet, full fluid diet, soft diet, bland diet, Modified diets,
- A)Enteral Nutrition:** - Definition, Sites of Diffusion, Types and sizes of Tubes, Types of feeds, Composition and Delivery methods and its complications.
- B)Parenteral Nutrition:** - Definition, Type of access, Parenteral nutrition solutions/composition. Administration methods, Monitoring & complications

UNIT II

18 Hours

NUTRITIONAL CARE IN DISEASE CONDITION

- A. Nutritional Management in infection and fever**
Defense mechanism, Metabolic changes during infection, Classification and entity of fever infection, Typhoid/ TB / parasitic infestation/ Aids, Cancer.
- B. Nutritional Management of physiological stress and Critical Care**
Nutrition in wound healing, **Surgery:** Pre &post surgical dietary management, **Burns** -Classification, Complication and Dietary management. **Trauma-** Dietary management, **Sepsis-** systemic, metabolic and catabolic responses, Systemic Inflammatory Response Syndrome(SIRS), Multiple Organ Dysfunction Syndrome(MODS), Dietary Management, Dumping Syndrome.

UNIT III

18 Hours

Nutritional Management of GI diseases: Definition, Aetiology, Symptoms, Physiological and functional changes and dietary management and impact on Nutritional status of

- A. Diseases of Esophagus and stomach**
Esophagitis (GERD), Hernia, Tonsillectomy, Dyspepsia, Peptic ulcer, Gastritis, Gastrectomy: Dumping syndrome
- B. Intestinal diseases**
Flatulence, Diarrhea, Constipation, Hemorrhoids, Diverticular disease, Duodenal ulcer, Inflammatory Diseases of Bowel-Crohn's disease and ulcerative colitis, Irritable bowel syndrome, Colostomy, Ileostomy
- C. Malabsorption syndrome**
Celiac disease (Tropical sprue), Steatorrhea, Intestinal Brush border diseases
- D. Protein losing enteropathy**

UNIT IV

18 Hours

A. Nutritional Management in Weight Imbalance

Prevalence and Classification, Components of body weight, Guidelines for Calculating Desirable body weight, Neural and Hormonal control of appetite and food intake.

B. Nutritional Management in Obesity

Etiology, Classification, theories and Energy balance, Physiology of the obese state & Clinical manifestations, Risk factors, Complications and Lifestyle modifications, Nutraceutical, Dietary and Surgical management

C. Nutritional Management in Underweight -Etiology and dietary management

D. Nutritional Management in Eating disorders - Definition, Signs and symptoms and Complications/health risks, Diagnostic criteria and nutrition management in Anorexia Nervosa, Bulimia Nervosa and Binge eating. Refeeding syndrome: - Definition, causes, symptoms, complication and treatment.

UNIT V

18 Hours

A. Dietary management in allergy

Definition, Symptoms and Diagnostic tests, Common food allergens and Mechanism of food allergy, Elimination diets, Milk allergy in infants and prevention of food allergy

B. Dietary Management in Nervous System Disorders

Etiology and Clinical features and Dietary management for – Parkinson's disease and Alzheimer's disease

C. Dietary Management in Bone Health disorders

Prevalence, Types and Etiology and Role of Nutrients in Osteoporosis and Osteomalacia, Bone Mineral Density (BMD) and Peak Bone Mass (PBM)

TEXT BOOKS:

1. Swaminathan S.: Advanced Textbook On Food & Nutrition Vol. 1 & N (2nd Ed. Revised _ Enlarged) Bapp Co. 1985.
2. Srilakshmi, (2007): Dietetics, published by K.K. Gupta For New age International Pvt. Ltd. New Delhi.
3. Shills and Young. Modern Nutrition In Health And Disease
4. Robinson Ch., M.B. Lawlea, W.L., Chenoweth, And A.E., Carwick : Normal And Therapeutic Nutrition, Macmillan Publishing Company.
5. Mahan L.K., Sylvia Escott-Stump (2000): Krause's Food Nutrition and Diet Therapy 10th Edition, W.B. Saunders Company London.
6. Clinical dietetics and nutrition by F.P Antia and Philip Antia.
7. Davis J. and Sherer, K. (1994): Applied Nutrition and Diet Therapy for Nurses, 2nd edition, W.B. Saunders Co.
8. Sue Rodwell Williams, (1993): Nutrition, Diet Therapy, (7th Ed): W.B. Saunders Company London.

REFERENCE BOOKS

1. Antia F.P. And Philip Abraham (2001) Clinical Nutrition and Dietetics, Oxford Publishing Company.
2. Alfred H.Katz, Prevention and health, the Haworth, Press, New York 1999.
3. Gopalan C., Ram Sastri B.V. And BalSubramaniam S.C., (2006) Nutritive Value of Indian Foods, Hydrabad, National Institute of Nutrition, Indian Council of Medical Research.
4. Raheena M. Begum (1989): A Text Book of Foods Nutrition and Dietetics, Wiley Eastern Ltd., New Delhi.
5. 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.
6. Willims S. R.: Essentials of Nutrition and Diet Therapy, 4th ed., Mosby College Pub. S. Louis, 1986.
7. Seth V and Singh K (2007). Diet Planning through the Life Cycle Part II: Diet Therapy. A Practical Manual, 4th edition. Elite Publishing House Pvt. Ltd.
8. ICMR (1999). Nutritive Value of Indian Foods. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
9. Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (2013). Textbook of Nutrition and Dietetics. Phoenix Publishing House Pvt. Ltd.
10. Mahan L K and Escott Stump S (2013). Krause's Food & Nutrition Therapy, 13th ed. Saunders-Elsevier.
11. Stacy Nix (2009). William's Basic Nutrition and Diet Therapy, 13th Edition. Elsevier Mosby.

TEACHING METHODOLOGY

- Lecture
- Active learning methodology
- Practical
- Group discussions
- Seminar
- Field Visits
- Assignments