

**DISCIPLINE SPECIFIC ELECTIVE COURSE
DSE HP 7B2: CLINICAL NUTRITION**

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
Clinical Nutrition DSE HP 7B2	4	2	0	2	Class XII	Studied Public Nutrition and Dietetics DSC HP 617

Learning Objectives

- To understand the basic principles of the nutrition care process in the management of hospitalized patients.
- To understand the etiopathophysiology and metabolic anomalies of various disorders/ diseases and provide appropriate nutrition care for the medical nutrition therapy (MNT) of various disorders / diseases
- To acquire basic skills in dietary counseling for management of various disease conditions

Learning Outcomes

The students will be able to

- Develop an understanding about the basic principles in management of hospitalized patients
- Acquire an in depth understanding about the etiopathophysiology and metabolic anomalies and MNT of various disorders/diseases
- Learn the principles of dietary counseling in various diseases.

**THEORY
(Credits 2; Hours 30)**

UNIT I: Nutritional Care of Patients

8 Hours

Students will be introduced to the concept of nutrition care process, ethical issues in patient care and dietary counseling for both OPD and IPD patients. The concept of nutrition support systems will also be discussed.

- Nutrition care process
Nutritional screening and assessment of the patients – out patient & hospitalized patients
Nutrition diagnosis, nutrition care plan and implementation
Nutrition monitoring, evaluation and follow up
- Ethical issues in patient care
- Dietary counseling
- Nutrition support systems - Enteral and Parenteral Nutrition

UNIT II: Diseases and their clinical management**10 Hours**

Students will understand the etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications, treatment, MNT and recent advances in different diseases/disorders. They will also be trained on disease specific dietary counseling.

- Metabolic disease: Diabetes Mellitus (Type 1, Type 2, Gestational Diabetes)
- Cardiovascular diseases: Metabolic Syndrome, Myocardial Infarction, Congestive heart failure

UNIT III: Dietary management of gastrointestinal and hepatobiliary disorders**6 Hours**

Students will understand the etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications, treatment, MNT and recent advances in gastrointestinal and hepatobiliary disorders. They will also be trained on disease specific dietary counseling.

- Gastrointestinal disorders- IBD, Diverticular disease
- Hepatic disorders- MAFLD, Liver Cirrhosis, Cholelithiasis, Cholecystitis

UNIT IV: Dietary management of lung and bone disorders**6 Hours**

Students will understand the etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications, treatment, MNT and recent advances in selected lung and bone disorders.

- Chronic Obstructive Pulmonary Disease
- Bone disorders – Osteoporosis, Sarcopenia

PRACTICAL
(Credits 2; Hours 60)

I. Assessment of patient needs – nutritional assessment and screening

- Nutritional interpretation of routine medical and laboratory data - Fasting and Post Prandial Blood Glucose, HbA1c, Lipid Profile, Liver Function Test

II. Planning and preparation of diets and dietary counseling for following diseases

- Type 1 diabetes
- Type 2 diabetes
- Metabolic Syndrome/ Myocardial Infarction
- Congestive Heart Failure
- Ulcerative colitis
- Diverticular disease
- MAFLD

III. Nutritional management in clinical setting

- Demonstration of dietary assessment software

Essential Readings

- Indian Dietetics Association, (2018) Clinical Dietetics Manual, 2nd Edition. Elite Publishing House Pvt. Ltd.
- Khanna K, Gupta S, Seth R, Passi SJ, Seth R, Mahna R, Puri S (2013). Textbook of Nutrition and Dietetics. 2nd Edn. Phoenix Publishing House Pvt. Ltd.
- Raymond, J.L. and Morrow, K. (2020) Krause and Mahan's Food & the Nutrition Care Process. 15th ed. Saunders-Elsevier

- Seth, V. and Singh K. (eds.) (2021) Principles of Medical Nutrition Therapy for Positive Clinical Outcomes, 1st Edition. Elite Publishing House Pvt. Ltd.

Suggested Readings

- Chowdhary S.R and Aeri B.T. (2023) Textbook of Food Science and Nutrition. Aarahan Publishers. ISBN:978-93-87270-08-4 <https://amzn.eu/d/bILz8S8>
- Gibney MJ, Elia M, Ljungqvist & Dowsett J. (2005) Clinical Nutrition. The Nutrition Society Textbook Series. Blackwell Publishing Company
- ICMR (2020) Estimated Average Requirements and Recommended Dietary Allowances for Indians. Published by National Institute of Nutrition, Hyderabad.
- Joshi Y K.(2008) Basics of Clinical Nutrition 2nd ed. Jaypee Brothers Medical Publishers
- Longvah T, Ananthan R, Bhaskarachary K and Venkaiah K (2017). Indian Food Composition Tables. National Institute of Nutrition, ICMR, Hyderabad.
- Puri S, Bhagat A, Aeri, BT, Sharma A (2019). Food Exchange List: A Tool for meal Planning. Elite Publishing House. New Delhi.
- Shils, M.E., Shike, M, Ross, A.C., Caballero B and Cousins RJ (2005) Modern Nutrition in Health and Disease. 10th ed. Lipincott, William and Wilkins.
- Siddhu A, Bhatia N, Singh K, Gupta S (2017). Compilation of food exchange list, technical series 6, Lady Irwin College, University of Delhi. Publ. Global Books Organisation, Delhi
- Williams, S.R. (2001) Basic Nutrition and Diet Therapy. 11th ed. Times Mirror Mosby College Publishing

Note: Examination scheme and mode shall be as prescribed by the Examination branch, University of Delhi, from time to time.