

DISCIPLINE SPECIFIC ELECTIVE COURSE
DSE HH 8B1: CLINICAL NUTRITION: THEORY TO PRACTICE

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		
Clinical Nutrition: Theory to Practice DSE HH 8B1	4	2	0	2	Studied Semester VII	Studied Dietetics and Public Health Nutrition I DSC HH 514 & Dietetics and Public Health Nutrition II DSE HH 7B1

Learning Objectives

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

Learning Outcomes

- 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.

SYLLABUS OF DSE HH 8B1**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 principles of medical nutrition therapy in a hospital setting for both outpatient & hospitalized 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 medical nutrition therapy**12 Hours**

Through this Unit, 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
- Gastrointestinal disorders- IBD, Diverticular disease

UNIT III: Dietary management of hepatobiliary, lung and bone disorders**6 Hours**

This Unit deals with the etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications, treatment, MNT and recent advances in degenerative diseases/disorders.

- Hepatobiliary and pancreatic disorders- MAFLD, Liver Cirrhosis, Cholelithiasis, Cholecystitis, Pancreatitis
- Chronic Obstructive Pulmonary Disease
- Bone disorders – Osteoporosis, sarcopenia

UNIT IV: MNT in surgery**4 Hours**

This Unit deals with the metabolic & clinical complications, treatment, MNT and recent advances in surgical care.

- Surgery: Pre and post-operative nutritional care
- Bariatric surgery: Types of bariatric surgery procedures, Indications and contraindications, Management of patient pre and post bariatric surgery

PRACTICAL

(Credits 2; Hours 60)

I. Assessment of Patient Needs – Nutritional Assessment and Screening 8 Hours

- 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 44 Hours

- Type 1 diabetes
- Type 2 diabetes
- Metabolic Syndrome/ Myocardial Infarction
- Congestive heart failure
- Diverticular disease
- MAFLD
- Pancreatitis
- Post-operative diet

III. Nutritional Management in Clinical Setting 8 Hours

- Visit to hospital dietetics department
- 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, S.J., 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/b1Lz8S8>
- Gibney, M.J., 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, R.J. (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.