

B.A (Prog) with Nutrition and Health Education (NHE) as Major
Category-II

DISCIPLINE SPECIFIC CORE COURSE – DSC-13-NHE: PUBLIC HEALTH NUTRITION

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course & Code	Credits	Credit distribution of the course			Eligibility Criteria	Prerequisite of the course
		Lecture	Tutorial	Practical / Practice		
Public Health Nutrition	4	3	NIL	1	Class XII	DSC-NHE- 2

LEARNING OBJECTIVES:

1. To explain the multidisciplinary nature, scope, and current concerns of public health nutrition and the role of nutritionists in healthcare systems.
2. To apprise the relevance of assessing nutritional status and the various tools/techniques for assessment of nutritional status.
3. To familiarize the students with the prevalence, etiology, clinical features, prevention, and management of major nutritional deficiency diseases.
4. To equip students with the practical skills in nutritional assessment, low-cost meal planning, and analyzing food security through case studies.

LEARNING OUTCOMES:

After completion of the course students will be able to:

1. Define public health nutrition and understand its interdisciplinary approach.
2. Assess nutritional status using both direct and indirect methods.
3. Gain knowledge of the common nutritional deficiency diseases and their management.
4. Develop practical skills in conducting dietary assessments and planning nutrition interventions for at-risk populations.

SYLLABUS OF DSC-13

THEORY
(Credits 3: 45 Hours)

Unit 1: Public Health Nutrition and Health Care Systems

(10 Hours)

- *Unit Description:* This unit will emphasize the multidisciplinary approach to improving population health through nutrition. It will also explore the role of public health nutritionists, health determinants, dimensions and healthcare delivery systems across various levels.
- *Subtopics:*
 - Definition and multidisciplinary nature of public health nutrition
 - Significance and emerging concerns in public health nutrition
 - Role of public health nutritionist
 - Health – definition, dimensions, determinants and indicators
 - Health care delivery system

Unit 2: Assessment of nutritional status

(10 Hours)

- *Unit Description:* This unit will equip the students the various methods of assessing nutritional status, objectives and importance.
- *Subtopics:*
 - Objectives and importance of assessment of nutritional status of individual and population groups
 - Methods of Assessment of Nutritional status of Individual and Population groups
 - Direct methods: Anthropometric assessment, Biochemical and biophysical assessment, Clinical examination, Dietary Assessment
 - Indirect methods: Health and Morbidity Indicators, Vital Statistics, Ecological factors

Unit 3: Nutritional Deficiency Diseases/Disorders

(15 Hours)

- *Unit Description:* This unit will introduce the students with the causes, symptoms, management, prevention of the following nutritional deficiency diseases/disorders:
- *Subtopics:*
 - Protein Energy Malnutrition, Moderate Acute Malnutrition, Severe Acute Malnutrition
 - Micronutrient deficiencies (Vitamin A deficiency, Nutritional anaemia, Iodine deficiency disorders, Vitamin D deficiency, Zinc deficiency, Fluorosis)

UNIT 4: Food and Nutrition Security

(10 Hours)

- *Unit Description:* This unit will explore the aspects of food and nutrition security, focusing on definitions, methods and challenges. It will also examine the National Programmes in this area.
- *Subtopics:*
 - Definitions, indicators, determinants and challenges
 - Methods for attaining food and nutrition security
 - National programmes for ensuring food and nutrition security

PRACTICAL (Credit 1: 30 hours)

1. Assessment of nutritional status:

- Anthropometry (height, weight, BMI, middle upper arm circumference, hip circumference, waist circumference, waist hip ratio)
- Dietary Assessment methods
- Clinical examination

2. Planning and preparation of low cost nutritious snacks for vulnerable groups:

- Protein Energy Malnutrition
- Nutritional Anemia
- Vitamin A deficiency

3. Case Studies

- Analysis of food security in India vs. other countries
- Success stories from nutrition security programmes

ESSENTIAL/RECOMMENDED READINGS:

- Park, K. (2021). *Park's Textbook of Preventive and Social Medicine* (26th ed.). Banarasidas Bhanot Publishers.

- Vir, S. (2023). Child, adolescent and women nutrition in India: Public Policies, programme and progress. KW Publishers, Daryaganj, New Delhi, India.
- FAO. (2023). *The state of food security and nutrition in the world 2023: Transforming food systems for affordable healthy diets*. Food and Agriculture Organization of the United Nations. <https://www.fao.org/publications/sofi/en/>
- ICMR NIN. (2024). *Estimated Average Requirements and Recommended Dietary Allowances for Indians*. National Institute of Nutrition.

SUGGESTED READINGS:

- Bamji, M. S., Krishnaswamy, K. & Brahman, G. N. V. (4 Eds.). (2019). Textbook of Human Nutrition (4th ed.). New Delhi, India: Oxford and IBH Publishing Co. Pvt. Ltd.
- World Health Organization (WHO). (2023). *Child Growth Standards*. <https://www.who.int/tools/child-growth-standards/standards>. Accessed Dec 2024
- National Health Mission (NHM). (2023). *Participant Manual FBCSA-Malnutrition*. https://www.nhm.gov.in/images/pdf/programmes/child-health/IECmaterials/PARTICIPANT-MANUAL_FBCSA-Malnutrition.pdf. Accessed Dec 2024.
- Smith, M., & Thompson, K. (2022). *Nutrition security: Ensuring healthy diets and sustainable food systems*. Global Nutrition Report. <https://globalnutritionreport.org/>
- International Institute for Population Sciences (IIPS), & ICF. (2020). *National Family Health Survey (NFHS-5), India 2019-20: Volume I: Key Findings*. International Institute for Population Sciences. https://rchiips.org/nfhs/NFHS-5_FCTS/India.pdf