

**Pool of Discipline Specific Elective Course (DSE) for Even Semester
B.A (Prog.) with Nutrition and Health Education (NHE)
Category-V**

**DISCIPLINE SPECIFIC ELECTIVE COURSE – DSE-NHE-8 : NUTRITIONAL ASSESSMENT
FOR HEALTH**

CREDIT DISTRIBUTION, ELIGIBILITY AND PREREQUISITES OF THE COURSE

Course Title & Code	Credits	Credit distribution of the course			Eligibility Criteria	Prerequisite of the course
		Lecture	Tutorial	Practical/ Practice		
Nutritional Assessment for Health	4	3	-	1	Class XII	NIL

LEARNING OBJECTIVES:

1. To familiarize students with importance of nutritional assessment for health
2. To equip students with knowledge of tools and techniques of anthropometric assessments
3. To make students aware of biochemical, clinical and dietary assessment

LEARNING OUTCOMES:

After completion of the course, the students will be able to:

1. Understand various nutritional assessment methods
2. Determine nutritional status by anthropometric measurements
3. Analyze and interpret clinical examination and dietary survey data

SYLLABUS OF DSE-NHE-8

**THEORY
(Credits 3: 45 Hours)**

Unit 1: Introduction to nutritional status assessment methods (6 Hours)

- *Unit Description:* This unit will introduce the importance and methods of nutritional status assessment.
- *Subtopics:*
 - Importance and objectives of nutritional status assessment
 - Overview of nutritional status assessment methods
- Indirect methods
 - i) Vital statistics

- ii) Ecological factors assessment
- Direct methods (ABCD analysis)
 - i) Anthropometry
 - ii) Biochemical and laboratory estimation
 - iii) Clinical examination
 - iv) Dietary survey

Unit 2: Nutritional anthropometry

(14 Hours)

- *Unit description:* This unit will familiarize the students with tools and techniques used for common anthropometric measurements and interpretation of anthropometric data for nutritional assessment.
- *Subtopics:*
 - Application of nutritional anthropometry
 - Tools and techniques for common anthropometric measurements
 - Weight
 - Height
 - Mid upper arm circumference (MUAC)
 - Head and chest circumference in children
 - Skinfold thickness
 - Determination of nutritional status by using anthropometric parameters
 - Assessment of children: standard deviation (SD score) or Z-score classification, Gomez classification, Indian Academy of Pediatrics (IAP) classification, interpretation of MUAC, growth chart and its importance
 - Assessment of adults: Body Mass Index (BMI), waist circumference (WC) for obesity
 - Limitations of anthropometry

Unit 3: Biochemical and clinical assessment

(12 Hours)

Unit Description: This unit will introduce students to uses and limitations of biochemical and clinical assessments.

- *Subtopics:*
 - Biochemical assessment
 - Uses and limitations
 - Biochemical tests for nutritional deficiencies-an overview
 - Clinical assessment

- Advantages and limitations
- Nutritional deficiency disorders and their diagnostic signs

Unit 4: Dietary assessment

(13 Hours)

- *Unit Description:* This unit will introduce students to importance, methods, analysis, interpretation and problems of dietary surveys.
- *Subtopics:*
 - Importance and types of dietary surveys
 - Methods of diet surveys
 - Analysis and interpretation
 - Problems in diet surveys

PRACTICAL (Credit 1: 30 Hours)

Unit 1: Anthropometry

(15 hours)

- Anthropometry- weight, height and MUAC measurements.
- Calculation of BMI; interpretation of BMI and WC in adults using case studies
- Plotting and interpretation of growth charts for children below 5 years.

Unit 2: Clinical and dietary assessment

(15 hours)

- Identification of clinical signs of common nutritional disorders.
- Dietary assessment- Food Frequency Questionnaire (FFQ) and 24-hour diet recall.

ESSENTIAL/RECOMMENDED READINGS:

- Bamji MS, Rao NP, Reddy V. (2017). *Textbook of human nutrition*. (4th ed). Delhi: Oxford and IBH Publishing co. (P) Ltd.
- Park K. (2023). *Textbook of preventive and social medicine*. (27th ed). Jabalpur, MP: Banarsidas Bhanot Publishers.
- Sharma S & Wadhwa A. (2003). *Nutrition in the community- a textbook*. Delhi: Elite Publishing House (P) Ltd.
- IGNOU (2017). MFN006, Public Nutrition, Delhi.

SUGGESTED READINGS:

- Agarwal A & Udipi SA. (2014). *Textbook of human nutrition*. Delhi: Jaypee Brothers (P) Ltd.
- Gibney et al. (2004). *Public health nutrition*. Hoboken, NJ: Blackwell Publishing