CLUSTER UNIVERSITY SRINAGAR

SYLLABUS (FYUP UNDER NEP 2020)

Offered By Department Of CLINICAL BIO-CHEMISTRY

Semester 1st to 3rd (Multi-Disciplinary Course)

Course Title: Basic Principles of Clinical Nutrition

Course Code: UGCBC22D101 **Max. Marks: 75**
Credits: 3 **External: 55; Min Marks: 22**
Contact Hrs: 45 **Internal (Continuous Assessment): 20 Marks, Min Marks: 08**

Objective: The main objective of this course is to present the importance of nutritional clinical biochemistry particularly with reference to diet and the knowledge about the deficiency disorders of nutrients.

Learning Outcomes: After the completion of the course the students will have a better understanding of nutrition and health, physical fitness and wellness. The students will be familiarized with importance of nutrition during various stages of life and will become acquainted with the management of nutrition related disorders.

Unit I: **(15 Hrs)**

Basic concepts of human nutrition

Introduction and definition of food and nutrition, Basic food groups: energy yielding, body building and protective foods. Body Mass Index, Basal Metabolic Rate (BMR) and Specific dynamic action (SDA) of foods and factors affecting these, energy requirements of man and woman, factors affecting energy requirements. Planning of dietary regimes for infants, pregnant women and elderly.

Unit II: **(15 Hrs)**

Vitamins and Minerals

Vitamins: Classification, Dietary sources, biochemical functions and specific deficiency diseases associated with vitamins. Nutritional requirements of vitamins for infants & children and during pregnancy and lactation.
Minerals: Nutritional significance of dietary calcium, phosphorus, magnesium, iron, iodine, zinc and copper. Deficiency diseases of minerals like calcium, zinc, iodine and iron.

Unit III: **(15 Hrs)**

Nutritional problems and management

Protein Energy Malnutrition (PEM): Etiology, clinical features and management of Marasmus and Kwashiorkor.
Obesity: Etiology, clinical features and management of obesity. Obesity as a risk factor for various lifestyle disorders.
Eating disorders (Anorexia Nervosa, Bulimia Nervosa, Binge-Eating Disorder).
Chronic diseases: cardiovascular disease, hypertension and diabetes mellitus.

Suggested readings

1. Introduction to Human Nutrition, 2nd Edn. Michael J. Gibney, Susan A. Lanham-New, Aedin Cassidy, Hester H. Vorster, Wiley-Blackwell.
2. Clinical Biochemistry: metabolic and Clinical Aspects by William J Marshal.
3. Textbook of Medical Biochemistry by MN Chatterjea and RanaShinde, Jaypee Brothers.