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## **OPEN ELECTIVE FOR OTHER DISCIPLINES**

BCE 457: BIOCHEMISTRY IN DAY- TO- DAY LIFE: SOFTCORE

Lecture Hours: 36

**Total Credits: 03** 

Course objectives

- To know the basic concepts of nutrition.
- To learn about macro and micronutrients, importance of water
- To study the significance of carbohydrates, proteins, fats and vitamins
- To bring awareness about effect of drugs on food and nutrition

Unit I

Nutrition- Concepts of nutrients, essential nutrients and their classification. Basal Metabolic Rate (BMR), factors affecting BMR. Specific dynamic action (SDA) of foods. Macro and micronutrients: Sources, requirements, functions and deficiency symptoms. Water: Distribution in the body, function, special properties of water, water balances and factors affecting water balance. Carbohydrates-Dietary sources, Essentiality of carbohydrates, Dietary fibres.

Unit II 12 hrs.

Proteins-Essential amino acids, nutritional classification of proteins, supplementary value of proteins, protein calorie malnutrition. Kwashiorkor and Marasmus, Nitrogen balance, Malnutrition, protein calorific value. Fats-Sources, invisible fat, essential fatty acids. Dietary formulation for different age groups: children, adults, old age, pregnancy and lactating mother.

Unit III 12 hrs.

Vitamins-Fat soluble and water-soluble vitamins, pro-vitamins, antivitamins, dietary sources, daily requirement, function and deficiency symptoms of vitamins. Hyper-vitaminosis, vitamin-like compounds, disorders. Food Drug Interaction: Effect of drugs on food and nutrition.

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