

BASIC BIOCHEMISTRY

03 CREDIT HOURS

Learning Outcomes/Objectives:

1. Students will be able to apply chemical principals to biological phenomena.
2. They will develop knowledge of the structure and function of the major classes of biological molecules and their role in cellular structure, function and bioenergetics.
3. They will know the clinical outcomes of any change in the structure and functions of these biological molecules.

Course Content:	MCQs	SEQs
Carbohydrate metabolism, Glycolysis, TCA (Tricarboxylic acid cycle) Gluconeogenesis, Glycogen metabolism, metabolism of monosaccharaide and disaccharides, Pentose phosphate shunt, Glycosaminoglycan and Glycoproteins, carbohydrate metabolism disorders	05	01
Introduction of carbohydrates, Introduction of lipids. Bioenergetics and oxidative phosphorylation.	03+02	0.5+0.5
Disposal of nitrogen, amino acid degradation and synthesis, conversion of amino acids to specialized product and amino acid metabolism disorders	05	01
Dietary lipid metabolism, Fatty acid triacylglycerol metabolism, complex lipid metabolism, cholesterol and sterol metabolism. Lipid metabolism disorders	05	01
Amino acids, structure of proteins, Globular proteins, hemoglobin, myoglobin, Hemoglobinopathies, xenobiotic.	02+03	0.5+0.5
Vitamins, nutrition, obesity and diabetes mellitus	04	01