



College of Pharmaceutical
Sciences and Drug Manufacturing
A college accredited by "NAQAAE"



PBC 302

COURSE DESCRIPTION: -

The course introduces the basic concepts of amino acids and protein (structures, properties, biological importance), amino acids as precursors for biosynthesis of biomolecules (e.g. neurotransmitters, nucleotides.....), enzymes (properties, enzyme action, regulation, inhibitors, clinical diagnosis), carbohydrate (isomerism, biological importance, derivatives, glycoproteins, proteoglycans, glucose transporters), lipid chemistry (classification, importance, glycolipids, lipoproteins, cholesterol, steroids), bioenergetics and oxidative phosphorylation (ATP synthesis, transport, inhibitors, uncouplers), vitamins (function, active forms, deficiency, and toxicity), hemoglobin & porphyrins (Hb derivatives and types, metabolism of Hb and regulation), clinical correlations, DNA and RNA (synthesis, function, genetic code), from gene to protein (transcription, post-transcription, translation). The course also introduces the control of gene expression, gene mutation regulation, gene transfer, and gene therapy.