

## BİK 101- MEDICAL BIOCHEMISTRY

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### 1. Term

1. week	Introduction to biochemistry, dentistry and biochemistry
2. week	Water and pH, liquid components in the organism
3. week	Regulation of water-electrolyte balance
4. week	Aminoacids, Peptides, Proteins. Introduction of glass materials, tools, tools and instruments used in biochemistry laboratory. Glass pipette and automatic pipette use
5. week	Enzymes: definition, classification, effect mechanism, kinetic properties, enzyme inhibition
6. week	Carbohydrates
7. week	Lipids I (Fatty acids, Triacylglycerols, Phospholipids)
8. week	Lipids II (Sphingolipids, Glycolipids, Steroids)
9. week	Lipids III (Sphingolipoproteins and metabolism)
10. week	Biological Membranes and Transport Ion Channels and Receptors
11. week	Glycolysis
12. week	Tricarboxylic Acid Cycle
13. week	Hexamono-phosphate and Gluconic Acid Path, Metabolism of other hexoses. Concentration units, solution preparation
14. week	Vitamins. Acidimetry-alkalimetry, pH measurement methods
15. week	Thermodynamic Laws, Bioenergetics and Metabolism, Phosphate Transfer
16. week	Midterm Exam

### 2. Term

1. week	Oxidation of Fatty Acids
2. week	Oxidation and Urea Conversion of Amino Acids
3. week	Oxidative phosphorylation
4. week	Regulation of Carbohydrate Metabolism
5. week	Lipid Biosynthesis
6. week	Cholesterol, Triacylglycerol and Phospholipid Synthesis
7. week	Nucleotides and Nucleic Acid Structure, Chemistry and Functions, Nucleotide Biosynthesis (Purine, Pyrimidine Met), Nucleic Acid Synthesis
8. week	Aminoacid Biosynthesis and Conversion to Special Product, Basic Principles of Spectrophotometry
9. week	Protein Synthesis, Centrifugation techniques, serum, plasma and erythrocyte package
10. week	Introduction to Hormone Biochemistry, Structure and Functions of Hypothalamus Hormones
11. week	Structure and Functions of Pituitary Hormones
12. week	Structure and Functions of Thyroid Hormones
13. week	Structure and Functions of Hormones Regulating Calcium Metabolism
14. week	Structure and Functions of Hormones Regulating Carbohydrate Metabolism
15. week	Structure and Functions of Steroid Hormones
16. week	Mir-term exam