

Department of Biochemistry

Govt . Degree college for women Karimnagar

Course outcomes (Cos):

At the successful completion of the course, the students are expected

- Become familiar with the fundamentals of Biochemistry at undergraduate level.
- Exhibit certain levels of learning outcomes such as, Understanding of discipline, critical thinking, problem solving, analytical and scientific reasoning, research/industry related skills, etc.
- Get exposed to a wide range of careers that combine biology, and medicine.

CO1. Chemistry of Biomolecules: The students will get basics of the biomolecules & will understand the structure, functions and biochemical reactions of the biomolecules.

CO2. Chemistry of Nucleic Acids & Biochemical Techniques: To understand the chemistry & functions of nucleic acids and to gain an insight into the principle of working of various techniques used for the biochemical analysis of biomolecules.

CO3. Bioenergetics, biological oxidation & Enzymology: The student will also have an understanding about the fundamental energetics of biochemical processes. The student will be able to describe structure, functions, mechanisms of action of enzymes, kinetics of enzyme catalyzed reactions and enzyme inhibitory and regulatory process.

CO4. Intermediary Metabolism: To have an indepth view on metabolism and to describe how biomolecules (carbohydrates, lipids, amino acids and nucleic acids) are synthesized and degraded in the body.

CO5. Physiology & Clinical Biochemistry: The students will gain knowledge regarding the digestion of biomolecules and physiology of various organs such as heart, muscle and nervous system. The student will also gain knowledge regarding the chemistry, physiological role and

disorders of various hormones of human body. To gain knowledge regarding the clinical tests to identify various diseases pertaining to liver, kidney, heart.

CO6. Molecular Biology: To understand the basics of replication, transcription and translation processes and their regulation.

CO7. Nutrition & Immunology: The student will be able to comprehend the structure, role of nutrients & their deficiency disorders .To be able to understand about the organs and cells involved in the immunological response, immunoglobulin's, antigen-antibody interactions and vaccines. To get overall knowledge on human body defense mechanism.

CO8. Microbiology & r-DNA Technology: The student will be able to understand basic knowledge on bacteria and viruses and the basics of genetic engineering, tools of r-DNA technology, principle and applications of blotting and gene cloning.

CO9. Cell biology & genetics: To have in depth understanding of cell structure and its functions and to be able to describe the gene interactions, mutations, linkage analysis and bacterial genetics.

CO10. Biotechnology: To have basic knowledge regarding the plant tissue culture, animal tissue culture techniques and to get knowledge on microbial and environmental biotechnology.