

DEPARTMENT OF BIOCHEMISTRY

Programme Outcome:

1. Students will be able to demonstrate an understanding of fundamental biochemical principles such as structure and functions of biomolecules, metabolic pathways and regulation of biochemical processes.
2. Students will gain the different skills in basic laboratory techniques in biochemistry and will be able to apply the scientific methods to the processes of experimentation and hypothesis testing.
3. The students will be able to apply and effectively communicate scientific reasoning and data analysis in both written and oral forums.
4. The students will understand and practice the ethics surrounding scientific research.

Course Outcome:

Course Name	Course Outcomes
I(T)- Biomolecules and Biophysical Techniques	1) Students will be provided with the fundamental & Basic knowledge to the subject. 2) The students will understand the Basic Principles of various instruments necessary for the experiments Practicals:- Students will be Provided with the Fundamental & Basic Laboratory Skills.
II(T) Thermodynamics, Membrane Biophysics and Biostatistics	1) Students will understand the significance and Energy Dynamics in the Living System at the Molecular Level. 2) Students will understand the importance of Data collection & it's Analysis by various Statistical tools which are necessary for Projects & Research. Practical:- This Paper will train the students to Separate & Estimate the various Biomolecules chromatocally.
III(T) Proteins and Enzymes	1) Students will learn about Enzymes& Proteins which are the Biological Catalysts of the Living System. 2) Students will be provided with the Basic Foundation in understanding the different Metabolic Pathways. Practical:- Students will be trained to Isolate, assay and to Study the Kinetics of different enzymes.
Cell Biology and Physiology	Students will be provided with the information and gain understanding about <ol style="list-style-type: none"> 1) Cellular and Cytoskeletal structure of the cells. 2) The different techniques used in the study of Cells & Organelles. 3) The importance on cell cycle and it's regulation. 4) The different Endocrine & Organ Systems of Human Physiology. Practicals

	Students will perform experiment on Blood Analysis, Cellular Structure & Cell Cycle.
Intermediary Metabolism	Students will gain understanding about the Energy Flow through the Living System. Practical Students will learn about Isolation & Estimation of Carbohydrates and Photosynthetic Pigments.
Nutritional and Clinical Biochemistry	Students will understand the importance of Nutrition in the Overall Health & Wellbeing and the analysis of Bodily Fluids for Diagnostic & Therapeutic Analysis. Practical Students will be trained how to collect, handle and analysed the biological fluids for Diagnostic Purposes.
Microbiology and Immunology	Students will learn about <ul style="list-style-type: none"> 1) the different microbes, their characteristic features and their importance in Health & Disease. 2) The aspects of the Immune System including its structure, function and disorders of the Immune System. 3) Isolating microbes, study the growth behaviour and also the effects of antibiotics. Practicals Students will learn how to determine Blood Group & Antigen Antibody interaction.
Molecular Biology	Students will understand the interaction between the various systems of a cell, including the inter-relationship of DNA, RNA & Protein synthesis and how these interactions are regulated. 2) They will learn about the integration of computers, software tools and databases in genomics & proteomics. Practical Student will be taught a hands-on approach on how to work with DNA via different techniques.