


B. Sc. – III	
Course Name	Course Outcome (CO)
Biochemical Techniques	Upon successful completion of the course, students will be able to:
	CO1. Understand the principle, methods and applications of centrifugation.
	CO2. Understand the electrophoresis, nucleic acid and protein
	CO3. Understand the electrophoresis, nucleic acid and protein
	CO4 Explain methods of measurement of radioactivity.
Animal Cell Culture	CO1. Explain characteristics of animal cell culture
	CO2. Understand the develop, test and make new products such as monoclonal antibodies.
	CO3 Know the developing DNA-based diagnostics and genetically engineered vaccines for animals.
	CO4. Know developing embryo -transfer technology, cloning, transgenic animals.
Bioprocess Engineering	CO1. Understand design and processes for the bioprocessing and biotechnology industries.
	CO2. Evaluate the scale up and strain improvement methods.
	CO3. Explain different methods of downstream processing.
Fermentation technology	CO1. Understand the different fermentation methods and fermentation economics.
	CO2.. Explain introduction and process or petenting.
	CO3. Understand trademarks, trade secrets, copyrights.
Plant Biotechnology	CO1 Understand basic concepts with the brief history and practical and applications of plant cell culture.
	CO2. Get the brief idea about the protoplast culture, somatic hybridization along with the practical applications of organ and tissue culture
	CO3. Learn about the haploid production, endosperm culturing suspension cultures and somaclonal variations.
	CO4. Understand the concepts and protocols of callus culture, organogenesis, embryo culture with its advantages and disadvantages.




Course Co-ordinator
Department of Biotechnology

Environmental Biotechnology	CO1. Understand environmental aspects of conventional and non conventional fuels and advantages of modern fuels over the conventional fuels.
	CO2. Learn waste water treatments at various levels using different techniques.
	CO3. Get an insights of greenhouse effects, global warming, ozone depletion, UV radiations and acid rain.
	CO4. Understand the concepts and significance of bioremediation, biopesticides, bioleaching and microbial enhancement of oil recovery.
Cell Metabolism and Virology	CO1. Understand the general concepts and terminologies of metabolism and different metabolic pathways.
	CO2. Learn the important steps of Urea cycle.
	CO3. Explain the carbohydrate, lipid, protein metabolism pathway.
	CO4. Learn the structure of viruses, mode of reproduction, isolation and cultivation of plant and animal viruses.
Gene Biotechnology and Bioinformatics	CO1. Understand gene targeting, human gene therapy and antisense therapy.
	CO2. Learn basic concepts of bioinformatics and databases of different biomolecules.
	CO3. Learn about genomics, proteomics and major concepts and applications.
	CO4. Understand various structural databases.




Course Co-ordinator
 Department of Biotechnology