rDNA TECHNOLOGY

Course outcomes:

After successful completion of the course, students will be able to:

CO 1. Use the tools and techniques used in rDNA technology
CO 2. Acquire expertise to use plasmids, vectors
CO 3. Learn to use different RNA, DNA based enzymes
CO 4. Acquire skills in recent techniques in rDNA technology

Isolation of DNA and RNA from bacteria, plants and yeasts
Southern and Northern blotting techniques
Western blotting
Studies on DNA replication
Studies on vectors
Ti plasmid
Probes
Chromosome mapping
Sequencing
PCR techniques
Construction of DNA libraries
Genomics and Proteomics
Study of mutagenesis

IMMUNOTECHNOLOGY

After successful completion of the course, students will be able to:

CO 1. Demonstrate immune system structure and function
CO 2. Carry out experiments to quantify immune cells
CO 3. Get hands-on training in various immunological assays of medical and diagnostic importance
CO 4. Develop skills in immunotechnology

Study of immune system in rats
Blood film preparation and study of immune cells
Histology of organs of immune system
Study of insect hemocytes
Production of antiserum
Isolation of lymphocytes
Antigen-antigen reactions (*in vitro*)
Phagocytosis (*in vitro*)
Immunodot technique
Immunodiffusion technique
Immunological diagnosis of pregnancy and infection
Demonstration of ELISA technique