

PRACTICALS (HARD CORE COURSES)

BTP 406 BIOCHEMISTRY AND BIOPHYSICS

Course outcome

The student will

- CO 1. Get hands-on training and develop practical skills
- CO 2. Learn to work independently
- CO 3. Be trained in assays and techniques used in Biochemistry and Biophysics
- CO 4. Have application-based learning

GLP, Safety practices

Titration of amino acid Glycine
Qualitative analysis of amino acids, proteins, sugars, lipids
Extraction of casein from milk by isoelectric precipitation
Estimations of proteins by Biuret method
Estimation of sugars by DNS method

Animal Handling techniques for biochemical assays

BTP 407 MOLECULAR GENETICS

Course outcome

The student will

- CO 1. Get hands-on training and practical skills in Molecular genetics
- CO 2. Learn the use of model organisms
- CO 3. Learn to solve genetics-based problems
- CO 4. Learn banding techniques and karyotyping

Morphological features of *Drosophila*
Mounting genital plate and sex comb in *Drosophila*
Isolation and staining of salivary gland chromosomes in *Drosophila*
Mutants of *Drosophila*
Micronucleus test in mice
Banding techniques and karyotyping
Demonstration of Barr bodies in buccal cells
Study of human blood groups
Chromatographic separation of eye pigments in *Drosophila*
Problems on quantitative inheritance
Problems on gene frequencies in population

BTP 408 MICROBIOLOGY

Course outcome

The student will:

- CO 1. Get hands-on training and practical skills
- CO 2. Learn use of safety equipment used in microbiology
- CO 3. Develop skills in isolation and culture of microorganisms from different sources
- CO 4. Carry out staining and identification of microorganisms

Microscopic observations of microorganisms
Microbial staining techniques (simple and differential staining, cell wall, endospores, intracellular lipids, acid-fast, flagella, viability)