BSP 508 APPLIED ECOLOGY LAB

Course Outcomes:

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

CO 1. Enhance the theoretical knowledge of applied ecology with lab experiments and fieldvisits.
CO 2. Understand plant-animal interactions and pray-predatorrelationship.
CO 3. Unravel medicinal properties of plants and significance of conservation
CO 4. Develop skills of remote sensing.
CO 5. Identify the freshwater and marine fisheryresources.
CO 6. Estimate growth parameters and determine the probability ofdeath.

1. Biodiversity
2. Terrestrial biodiversity
3. Aquatic biodiversity
4. Plant-animal interactions
5. Endangered medicinalplants.
6. Landscapes analysis through remote sensing data.
7. Freshwater fishery resources
8. Marine fishery resources
9. Estimation of growth parameters
10. Life-tables
11. Prey-predator relationships

BSP 509 IMMUNOLOGY LAB

Course Outcomes:

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

CO 1. Develop skills in immunology lab experiments.
CO 2. Isolate lymphocytes and identify different blood cells
CO 3. Understand hemolymph cells in insects
CO 4. Perform immunoassays using various immunodiffusion methods
CO 5. Detect and quantify antigens and allergens using established methods

1. Study of immune system in rats
2. Blood film preparation and study of immunecells
3. Isolation oflymphocytes
4. Study of insecthemocytes
5. Ouchterlony double diffusion assay
6. Radial Immunodiffusiontechnique
7. Immunological diagnosis of pregnancy and infection
8. DOT- ELISA technique
9. Rocket immunoelectrophoresis method
10. Detection of allergens: Pollen Count by sticky slide method

BSP 510 ECOTOXICOLOGY LAB

Course Outcomes:

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

CO 1. Learn and practice safety measures to be taken inlaboratories.
CO 2. Determine acute and chronic toxicities throughbioassays.
CO 3. Estimate oil and grease from water and differentiate between clean and polluted watersamples

CO 4. Perform tests for detection of metals and other toxic pollutants and food adulterants.
CO 5. Assess effect of metals on plant growth

1. Good Laboratory Practices
2. Safety notices in environmental toxicological studies.
3. Bioassay experiments using different test systems.
4. Behavioural study of the fish under exposure to toxicants.
5. Experiments on solid waste
6. Estimation of oil and grease in water sample.
7. Demonstration of catalase activity in polluted waters.
8. Spot test for detection of metals, residual chlorine, nitrite poisoning, fluoride toxicity, food adulterants and pesticide residues.
9. Effect of $CdCl_2$ on germination of Bengal gram.
10. Effect of toxicants in meristematic tissue (Onion root tips).
11. GC analysis of pesticide residues in food samples.