

## Department of Biosciences MSc Biosciences

## **BSP 510 ECOTOXICOLOGY LAB**

## **Course Outcomes:**

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

- Gain the knowledge how toxicology and ecology are integrated.
- Know what all safety measures to be taken in laboratories.
- Know how to determine acute and chronic toxicities through bioassays.
- Become skilled conducting experiments on solid wastes.
- Know how to estimate oil and grease in water sample.
- Discern clean and polluted water.\
- Know how to perform the spot test for detection of metals and other toxic pollutants.
- Become expert how to detect food adulteration.
- Observe and realize the impact of metal on plant germination and growth.
- Gain a practical knowledge how to perform GC analysis for food samples for pesticide residues.
  - 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 CdCl2 on germination of Bengal gram.
  - 10. Effect of toxicants in meristematic tissue (Onion root tips).
  - 11. GC analysis of pesticide residues in food samples.