

**MANGALORE UNIVERSITY**

**DEPARTMENT OF BIOSCIENCES**

**M.Sc. ENVIRONMENTAL SCIENCE**

**ESP 556 ENVIRONMENTAL TOXICOLOGY LAB**

**Course Outcomes:**

CO1 Describe safety measures while handling toxic chemicals.

CO2 Study bioassay tests.

CO3 Learn spot tests to detect toxic compounds in different samples.

CO4 Study the effect of toxicants in meristematic tissue.

CO5 Learn GC analysis of pesticide residues in food samples.

1. Safety notices in environmental toxicological studies.
2. Bioassay experiments using different test systems.
3. Behavioral study of the fish under exposure to toxicants.
4. Estimation of oxygen consumption by the organism (fish) under stressed condition (physical & chemical).
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.