

MANGALORE UNIVERSITY
Department of Biosciences
MSc Biosciences

BSP555 ENVIRONMENTAL PHYSIOLOGY LAB

Course Outcomes:

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

- Expand the knowledge in environmental physiology conducting experiments with application point of view.
- Know how to determine blood indices, blood pressure and thermal stress.
- Demonstrate rate of transpiration, effect of temperature on the rate of respiration.
- Know how to check the seed health and effect of salinity on seed germination.
- Gain the skill to find out the viability of seeds, inducers and inhibitors of germination.
- Realize how plant responses against salinity and metal stress.
- Know how to apply radioisotope methodology

1. Haematology -

- 1.1 Determination of blood indices
- 1.2 Determination of blood pressure.

2. Respiration -

- 2.1 Estimation of oxygen consumption by the organism under stressed condition (thermal stress).
- 2.2 Demonstration of rate of transpiration by photometry.
- 2.3 Effect of temperature on the rate of respiration.

3. Seed physiology –

- 3.1 Seed health testing.
- 3.2 Determination of percent viability of seeds by germination method.
- 3.3 Germination inducers and inhibitors
- 3.4 Determination of β -amylase activity in germinating seeds.
- 3.5 Effect of salinity on seed germination.

4. Stress Physiology-

- 4.1 Plant responses against salinity and metal stress
- 4.2 Radioisotope methodology and its principles (GM Counter and Scintillation Counter)