

PRACTICAL COURSES **BSP 506 ANIMAL PHYSIOLOGY LAB**

Course Outcomes:

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

- CO 1. Perform experiments to estimate enzyme activity and understand factors affecting enzyme activity
- CO 2. Perform experiments on hormonal control of reproductive biology.
- CO 3. Perform experiments in muscle physiology and osmoregulation.
- CO 4. Conduct qualitative tests for excretory products and demonstrate active transport

1. Gastrointestinal function–

1.1. Factors affecting enzyme activities in digestion of foodstuffs.

1.2 Quantitative estimation of Enzyme (amylase) activity.

2. Neuroendocrinology–

2.1 Effect of hormones on blood glucose in rats.

2.2 Study of estrous cycle in mice

2.3 Study of sperm count, sperm morphology and sperm motility

3. Muscle Physiology-

3.1 Histochemical detection of SDH activity in red and white muscle fibres.

4. Osmoregulation-

4.1 Estimation of Fluid balance in an animal.

4.2 Osmotic relationship in animals at the level of cell as well as entire organism.

5. Excretion-

5.1 Qualitative tests for excretory products.

5.2 Demonstration of active transport.

BSP507 PLANT PHYSIOLOGY LAB

Course Outcomes:

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

- CO 1. Realize the importance each **nutrient in plant growth through experimentation** and observation.
- CO 2. Observe mineral deficiency symptoms in plants.
- CO 3. Know how to perform the tests for understanding water relations.
- CO 4. Understand the photosynthesis by conducting some allied experiments.
- CO 5. **Understand the role of growth hormones in plants.**

1. **Plant nutrition-**

1.1 Observation of mineral deficiency symptoms in plants.

2. Water relations-

2.1 Experiments to demonstrate the diffusion pressure deficit in plant cell.

2.2 Determination of stomatal index, stomatal frequency and measurement of stomatal aperture.

2.3 Determination of water potential

3. Photosynthesis -

3.1 Separation and estimation of chloroplast pigments.

3.2 **Demonstration of Kranz anatomy**

4. **Growth hormones and their regulation-**

4.1 Experiments to demonstrate the effect of hormones on shoot apex.

5. **Plant pathology**

5.1 Pathogens in crop plants