

Seed health testing.

Determination of percent viability of seeds by germination method.

Germination inducers and inhibitors

Determination of β -amylase activity in germinating seeds.

Effect of salinity on seed germination.

4. Stress Physiology-

Plant responses against salinity and metal stress

Radioisotope methodology and its principles (GM Counter and Scintillation counter)

BSP 557 DEVELOPMENTAL BIOLOGY LAB

Course Outcomes:

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

CO 1. Develop practical skills using model organisms in developmental biology

CO 2. Gain the skills to isolate and mount the imaginal discs, sex comb, genital plate.

CO 3. Carry out practicals on developmental mutants in *Drosophila* and *Arabidopsis*.

CO 4. Carry out staining techniques for gametes and embryo.

1. Study of model organisms used in developmental Biology.
2. Isolation and mounting of imaginal discs.
3. Structure of sperms and eggs.
4. Isolation and mounting of sex comb and genital plate in *Drosophila*.
5. Study of developmental mutants in *Drosophila* and *Arabidopsis*.
6. Spiral cleavage and general development in snail.
7. Study of hemimetabolous and holometabolous development in insects.
8. Life cycle and metamorphosis in frogs.
9. Structure of *Drosophila* and chick egg.
10. Study of chick embryo by vital staining technique.
11. Developmental stages in frog.
12. Developmental stages in chick.
13. Study of spermatogenesis in rat.
14. Plant cell totipotency (growing a carrot from adult cells)
15. Seed germination

BSP 558 NUTRITIONAL BIOLOGY LAB

Course Outcomes:

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

CO 1. Understand and prepare meal plans using food exchange lists for different age groups and physiological conditions

CO 2. Create awareness about low-cost nutritional rich food for children.

CO 3. Describe different adulteration tests for foods.

CO 4. Understand the food spoilage microorganisms.

1. Adulteration tests (3 samples- cereal/sugar products, milk/milk products, spices and condiments)
2. Planning balanced diet for reference man and woman using ICMR RDA
3. Planning and preparing two different low-cost weaning foods
4. Planning a diet for PEM and Nutritional anaemia
5. Planning a diet for: Adolescent child, Pregnant woman, Lactating woman, Elderly
6. Estimation of total microbial count of yeast and molds from spoiled food samples