

Course Code	Course Name	Credits
26BY156	PLANT BIOLOGY LAB	02

Objective

The objective of this laboratory course is to provide students with practical training in genetics, microbiology, plant pathology, economic botany, mushroom cultivation, and ecological techniques. Students will develop skills in observation, analysis, field sampling, microbial handling, plant identification, and scientific reporting.

1. Study of Mendelian inheritance using seed characters.
2. Study of dominant and recessive traits using charts/models.
3. Problems based on Mendelian inheritance and pedigree analysis.
4. Study of microbiology laboratory instruments and sterilization techniques.
5. Preparation and sterilization of culture media for microbial growth.
6. Isolation of microorganisms from soil, air, or water using simple culture techniques.
7. Observation of bacteria by Gram staining and fungi by lactophenol cotton blue staining.
8. Identification of economically important plant products, plant parts, and their uses.
9. Study of medicinal plants and their useful parts.
10. Study of plant diseases based on the diseases mentioned in the theory syllabus.
11. Mushroom cultivation: spawn preparation and fruiting body development.
12. Quadrat and transect methods for plant community analysis.

Students are required to perform and record at least eight experiments in the laboratory manual as part of the course requirements.