

Course Code	Course Name	Credits
26BY653	ADVANCED PLANT DIVERSITY LAB	02

Objective

To provide postgraduate students with practical training in plant diversity and taxonomy, through the study of algae, fungi, bryophytes, pteridophytes, gymnosperms, angiosperms and economic Botany. The course also aims to develop skills in plant diversity and laboratory/field-based observations relevant to Botany.

1. Study of morphology of algae: *Ulva*, *Sargassum*, *Gracilaria*, *Nostoc*, *Volvox*, *Anabaena*, and *Spirogyra*.
2. Study of fungi and lichens: *Albugo*, *Agaricus*, *Peziza*, *Phytophthora*, *Penicillium*, *Usnea*, and *Parmelia*.
3. Study of bryophytes: *Anthoceros*, *Marchantia*, *Porella*, and *Polytrichum*.
4. Study of pteridophytes: morphology and anatomy of *Marsilea*, *Adiantum*, *Psilotum*, *Lycopodium*, *Selaginella*, *Isoetes*, *Equisetum*, *Pteris*, and *Azolla*.
5. Study of gymnosperms: morphology and anatomy of *Cycas*, *Araucaria*, *Pinus*, *Cupressus*, and *Gnetum*.
6. Study of paleobotanical forms: *Rhynia*, *Lepidodendron*, *Stigmaria*, *Calamostachys*, *Lyginopteris*, *Lagenostoma*, and *Cordaite*s using photographs/diagrams.
7. Study of taxonomic terminology using locally available plant specimens.
8. Morphological study, analytical drawing, description, and identification of flowering plants up to species level.
9. Study and identification of economically important plants based on their botanical name, family, useful parts and economic uses.
10. Collection, preparation, preservation, and submission of herbarium specimens following standard herbarium techniques.
11. Field study/Local excursion for collection, observation, and identification of plant specimens

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