

Facilities

The department of Botany is fully equipped to handle the theory and practical classes for masters, M.Phil. and Ph.D. students. The department has two lecture rooms and four laboratories for teaching. In addition, specialized facilities are available for teaching (see below) and auditorium provides venue for conferences and lectures and other activities conducted by the Delhi University Botanical Society (DUBS). The Department has established several state-of-the-art facilities for teaching and research, which are available for use by post-graduate students, research scholars and faculty.

1. Central Instrumentation Facility (CIF):

The CIF includes several basic instruments, which are routinely used for teaching various courses in the M.Sc. program. Some of these include PCR machines, spectrophotometer, refrigerated microfuge, gel electrophoresis units (horizontal) and electrophoresis power supplies, electroporator, pH Meters, stirrers, vortex mixers, dry blocks, table-top centrifuges (non-refrigerated), Refrigerated bench-top and floor centrifuges, temperature-controlled incubator shakers, plant growth chamber, plant growth rooms, UV transilluminator, micro- and macro- weighing balances, refrigerated water baths and micropipette sets, BOD incubator, incubator oven (2 high temperature, 3 routine), automated soil CO₂ flux system, [microtome](#), Altimeter, GPS system, soil thermometer, soil colour chart, Kjeldahl system digestion unit, fluorimeter, Nikon/Carl Zeiss microscopes and Olympus binoculars, pollen and spore samplers (portable) and a refractometer. Additionally, the CIF is also equipped with high-end instruments viz., high-speed centrifuge, gel documentation system, fluorescence microscope, sonicator, Speed vac, gel dryer, Bioluminescence imaging system, HPLC, Nitric oxide analyzer and Real time PCR. The facility also has -80°C and -20°C freezers for use by various laboratories. Among other common facilities is a water purification system, ice-flaker machines, autoclaves and cold rooms that cater to various research laboratories. A radioisotope handling facility with Laser Scanner for imaging is also being developed (awaiting license from BRIT/BARC).

2. Microscopy facilities:

The Department of Botany has also established facilities for Transmission Electron Microscopy ([TEM](#)) and Scanning Electron Microscopy ([SEM](#)) with funds obtained from the Department of Science and Technology under the FIST program and University of Delhi, respectively. In addition, a Confocal Microscope has been operational in the Department for twelve years.

3. Growth facilities:

The Departmental facilities include a plant tissue culture room and three greenhouses under different temperature regimes and photoperiod conditions for growth of different plant materials. Additionally, three growth rooms for model plants viz., Arabidopsis and two growth rooms for studying plant interactions with various pathogens and pests are also available. The Department also has a microbial culture facility and a botanical garden that houses several plants of academic interest.

4. Herbarium:

The Delhi University Herbarium (DUH), housing nearly 13,000 dried plant specimens, has grown manifold since its inception in 1953. The herbarium houses specimens of vascular plants, mosses, and fungi collected from different parts of India. Specimens maintained by the herbarium include unmounted research vouchers and mounted accessioned specimens that document the local flora. Facilities include the recently added compressors and digitizer. Visitors and students from various colleges visit the herbarium for identification of plants.

5. Museum of Botanical Diversity:

The [Museum of Botanical Diversity](#) in the Department of Botany houses the collection of botanical specimens gathered by the late Prof. P. Maheshwari, and further augmented from time to time by faculty members and students of the Department. The facility houses specimens of various groups such as algae, fungi, bryophytes, pteridophytes, gymnosperms and angiosperms as well as plants of economic importance and their derived products. The museum caters to the needs of both post-graduate and visiting undergraduate students.

6. Bioinformatics laboratory:

The Department of Botany has a well-structured [bioinformatics facility](#) with Sun SUNFIRE X4170 servers operational on Linux and Windows platforms. Thirty-five students can work simultaneously on independent thin clients (terminals).

7. Library:

The Departmental library is located on the first floor. It houses a large [number of books](#), dissertations and theses which are referred regularly by masters, M.Phil and Ph.D students. The library includes reading space as well as 6 computers for use by students.

8. Student facilities:

The Department has an air-conditioned [Students' Lounge](#) with a small cafeteria that is operational during break time between classes. A [Medical Room](#) is also available for students within the Department premises.