

## **Research Activities of Department of Botanical & Environmental Sciences**

- Year of establishment: 1990
- Faculty Strength: 7
- No. of Ph.D. Research Scholars: 45
- Botanical Garden (10 hectares) financially supported by Ministry of Environment, Forests & Climate Change under Assistance to Botanic Gardens Scheme.

### **Recognized by:**

- (i) Department of Science & Technology (DST), Govt. of India under DST-FIST (Level-1)
- (ii) University Grants Commission (UGC), New Delhi under DRS-1

**Thrust areas of Botany:** Ecology and Ecophysiology, Phytoremediation, Plant Growth Regulation, Genetics & Environmental Toxicology, Cancer Chemoprevention, Plant Systematics, Bioactivities of Medicinal Plants, Plant Tissue Culture, Biodiversity, Natural Plant Products, Plant Databases etc.

**Thrust area of Environmental Sciences:** Water, Air & Soil Pollution Monitoring, Bioremediation, Environmental Toxicology, Industrial Wastewater Management, Solid Waste Management, Vermitechnology, Wastewater Treatment, Computer Applications in Ecology, Environmental mutagenesis.

### **Major Equipments:**

1. Amino acid analyzer
  2. Antioxidant analyzer
  3. Atomic Absorption Spectrophotometer
  4. Bio-safety Hood
  5. CO<sub>2</sub> Incubator
  6. Flame photometer
  7. Fluorescent microscopes
  8. FTIR
  9. Gas Chromatography
  10. Gel Documentation System
  11. High Volume Sampler (PM10, PM2.5)
  12. Inductively Coupled Plasma - Mass Spectroscopy (ICP-MS)
  13. Infra Red Gas analyzer (IRGA)
  14. Ion Chromatography
  15. Laminar Air Flow Hood
  16. Microwave Plasma Atomic Emission Spectrophotometer (MP-AES)
  17. Multimode Micro plate reader
  18. Preparatory-High Performance Liquid Chromatography (Prep-HPLC)
  19. Thermocycler
  20. Ultra High Performance Liquid Chromatography (UHPLC)
  21. UV-Vis Spectrophotometer
- (S. No. 1, 2, 3, 12, 14, 16, 18, 20 are part of Central Facility)

### **Collaborations:**

#### **International:**

1. Columbia University, New York, USA
2. University of Wisconsin, Madison, USA

#### **National:**

3. CSIR-Institute of Himalayan Bioresource Technology (IHBT), Palampur
4. CSIR- Indian Institute of Integrative Medicine (IIIM), Jammu
5. Indian Institute of Technology, Roorkee
6. Panjab University, Chandigarh
7. Punjabi University, Patiala
8. Thapar Institute of Engineering & Technology, Patiala (Deemed to be University)
9. NEERI, Nagpur
10. Centre for Remote Sensing, Punjab Agricultural University Campus, Ludhiana
11. Kurukshetra University, Kurukshetra

**Research Publications (2015-2025): 745** (as per SCOPUS database)