

Department of Botany

D.S.B. Campus, Kumaun University, Nainital
(Vision, Mission, PEO, PO, PSO & CO)

Vision:

To promote the culture of learning by educating students in the basics of plant science, its related components, and evolving advancements that will serve science and the nation in the twenty-first century.

Mission:

1. To make a significant contribution to the national goals of promoting knowledge society through high quality education, innovative-research and services to the society in the field of plant sciences.
2. To produce highly qualified post graduate and Ph.D. students in the field of plant sciences that serve in academic and research institutions.
3. To serve the society's needs and contribute to transform the society into a knowledge society.

Program educational objectives (PEOs):

PEO-1: Enable graduates to pursue post graduate studies in botany and succeed in academic and research careers.

PEO-2: Possess essential professional plant science skills that make them confident to synthesise and apply knowledge in various application domains.

PEO-3: Demonstrate an understanding of the importance of life-long learning through practical training.

PEO-4: Assume leading and influential roles in their organisations and societies.

Programme outcome:

After the successful completion of M.Sc. degree in Botany the students will be able to:

PO-1. Understand structure, function and life-cycle patterns of different plant life-forms.

PO-2. Achieve an up-to date level of understanding of plant physiology, ecology and biochemistry.

PO-3. Identify plant diseases, causing organisms and their control measures.

PO-4. Identify plants in their natural habitats, their economic and ethno-botanical importance.

- PO-5. Differentiate between different types of ecosystems and their structural components.
- PO-6. Evaluate services provided by different ecosystems in Himalayan region.
- PO-7. Understand and solve problems related to climate change and global warming.
- PO-8. Isolate and identify phytochemicals in different plant species and their antimicrobial potential.
- PO-9. Analyse regeneration status of different tree species in their natural habitat.
- PO-10. Develop strategies for conservation of rare and threatened plant species.
- PO-11. Develop protocol for propagation of economically and medicinally important plant species through plant tissue culture.

Programme Specific Outcome (PSOs):

After the successful completion of M.Sc. degree in Botany the students will be able to:

- PSO 1. Apply knowledge of botany in many applied fields like Agriculture, Horticulture, Sericulture, Forestry, Pharmacology and Medicine.
- PSO 2. Able to qualify competitive exams like UPSC, NET, SET, GATE, etc.
- PSO 3. Understand the multi-functionality of plants in production of secondary metabolites and their widespread industrial applications.
- PSO 4. Correlate biodiversity to habitat, climate change, land and forest degradation and develop conservation measures.

COURSE OUTCOME (COs):

At UG. level:

1. Students will be able to explain how organisms function at the level of the biomolecules, gene, genome, cell, tissue, and various plant-systems.
2. They will be able to explain various physiological and biochemical processes, development, reproduction and behavior of different forms of plant life.

At PG. level:

1. Students will be able to understand the range of plant diversity in terms of structure, function and conservation.
2. Students will strengthen the experimental techniques and methods of analysis appropriate for their area of specialization within botany.