



# Vidyasagar University

Midnapore-721102, West Bengal

POs & PSOs for the Post-Graduate Programme  
in  
**BOTANY AND FORESTRY**

**National Educational Policy – 2020**



[w.e.f. 2025-26]

## Department of Botany 25-26

**Program Outcomes (POs)** The Scope of Botany deals with the course content of the subject and the utility of such curriculum in relation to mankind. An attempt is made here to give a summary regarding the scope of botany studies.

<b>PO1</b>	Inclusive Knowledge of Plant Sciences: Acquire advanced understanding of extant plant diversity (algae, bryophytes, pteridophytes, gymnosperms, and flowering plants), diversity of prehistoric plants, fungal diversity, microbiology, biochemistry, plant physiology, genetics, biotechnology and ecology,
<b>PO2</b>	Analytical and Critical Thinking Skills: Develop the ability to analyze plant-related problems, interpret scientific data, and apply logical reasoning in biological research.
<b>PO3</b>	Practical and Laboratory Competence: Gain proficiency in laboratory techniques, microscopy, other high end instruments, plant and fungi identification, herbarium preparation, and field-based studies.
<b>PO4</b>	Research Skills: Formulate hypotheses, design experiments, and conduct independent research in numerous domains of plant sciences.
<b>PO5</b>	Environmental Awareness: Recognize varied environmental awareness programs and their importance, biodiversity conservation, impacts of climate change, and sustainable use of plant wealth.
<b>PO6</b>	Use of Modern Tools and Techniques: Develop skills in microbiology, molecular biology, bioinformatics, and other emerging technologies relevant to plant sciences.
<b>PO7</b>	Communication Skills: Efficiently communicate scientific thoughts through reports, seminar presentations, and academic writing.
<b>PO8</b>	Ethics and Professional Responsibility: Obey to ethical practices in research, environmental management, and professional conduct.
<b>PO9</b>	Lifelong Learning Engage in continuous learning, adapts to emerging trends in plant sciences, and pursues higher studies or professional development.
<b>PO10</b>	Entrepreneurial and Employability Skills: Develop skills relevant to careers in academia, research institutions, agriculture, forestry, pharmaceuticals, and environmental consultancy, including entrepreneurship in plant-based industries.
<b>PO11</b>	Economic Development and Livelihood Support: various industries and rural livelihoods such as Forestry, horticulture, floriculture, and agro-based industries; production of timber, fibers, oils, dyes, and other plant products; employment generation in agriculture, research, and environmental sectors

### **Program Specific Outcomes (PSOs)**

After the successful completion of M.Sc. in Botany program, the students are expected to:

<b>PSO1</b>	Apply fundamental knowledge of plant science to real-world biological problems; can be absorbed in Schools, Colleges & Universities, Nurseries, Farms, Environmental Consultancy services, pharmaceutical Companies, Forest services, Quality control, and Health Services.
<b>PSO2</b>	Conduct independent research and projects in areas of Plant Systematics, Microbiology, Plant Pathology, Plant Physiology, Biotechnology, Palynology & Pollination ecology.
<b>PSO3</b>	Apply botanical knowledge for societal benefit, including sustainable agriculture, climate change mitigation, and conservation of natural resources.
<b>PSO4</b>	Appreciate the historical and cultural development of Botany, including Indian Knowledge Systems, and apply botanical knowledge in socially relevant, ethical, and interdisciplinary contexts.