

# Programme Outcomes, Programme Specific Outcomes For PhD Programmes

Programme Name: Ph.D. in Botany



Department of Botany  
**University of North Bengal**  
West Bengal, INDIA

## **Programme outcomes**

- The Ph.D. course work in Botany is framed to inculcate the research scholars with basic, applied and instrumental knowledge associated with plant science.
- Students will be equipped with background status and innovation in research work and future perspectives of the selected topics of research.
- Students would be taught different aspects about the importance of literature review, accessing scientific databases, laboratory safety and code of conduct with the view of preparing them for taking up research problems.
- Students would be made aware of the research ethics, scientific temper, intellectual property rights and code of conduct for pursuing career in research and development.
- Students would be taught about the different instrumentation techniques, statistical tools and bioinformatics tools, so that they could apply these in their field of research depending upon their requirements.

## **Programme specific outcomes**

- Students after completing the six month course will have an elementary knowledge about the different disciplines of the subject.
- Students will be able to utilize their knowledge of using instruments and other analytical techniques for solving their research problems.
- Students will be aware of the consequences of deviating from the standard code of conduct in research laboratories, plagiarism, and paraphrasing, ethical aspects and so on.
- Students will be able to access and extract the desired information from the different scientific databases and resources.
- Students will be able to read and write good scientific papers.
- The programme will motivate the students to take up the challenges of the Ph.D course and make them mentally prepare to excel in the respective field of their research work.
- After completion of the course, students will gain the capacity to serve the various higher academic institutions like Colleges, Universities, National Research Institutes in various fields of apex academic research.

## Course outcomes

Paper	Course No.	Course Title	
<b>Paper-I: Research Methodology</b>	<b>Course-I, II, III</b>	<b>Review of published Research, Research Ethics, Instrumentation &amp; Bioinformatics</b>	<p><b>Knowledge gained:</b></p> <ul style="list-style-type: none"> <li>• Background, status of research work and future perspectives on the selected topic of research work.</li> <li>• Conceptual understanding of research ethics, plagiarism, laboratory practices and Intellectual property rights.</li> <li>• Laboratory conduct and knowledge of major instruments required to conduct research work.</li> </ul> <p><b>Skills gained:</b></p> <ul style="list-style-type: none"> <li>• Ability to search the internet and scientific databases to accumulate information and latest advances in the field of concerned research topic.</li> <li>• Ability to refrain from plagiarism and follow research ethics and code of conduct.</li> <li>• Hands on experience to operate the major instruments.</li> </ul> <p><b>Competency developed:</b></p> <ul style="list-style-type: none"> <li>• At the end of the course, students will be ready to conduct experimental works on his own.</li> <li>• Ability to write and review scientific articles.</li> <li>• Ability to follow good code of conduct for performing research work.</li> </ul>
<b>Paper-II: Advanced Level Course</b>	<b>Course-IV</b>	<b>Advanced course in Botany</b>	<p><b>Knowledge gained:</b></p> <ul style="list-style-type: none"> <li>• Fundamental and advanced knowledge of the subject.</li> <li>• Recent advances in the nomenclatural aspects, genetic engineering, plant breeding, microbiology, plant physiology and biochemistry etc.</li> </ul> <p><b>Skills gained:</b></p> <ul style="list-style-type: none"> <li>• Thorough understanding of the background and recent developments of the subject.</li> <li>• Ability to understand the concept of any topic and to build up on the existing knowledge.</li> </ul> <p><b>Competency developed:</b></p> <ul style="list-style-type: none"> <li>• Ability to utilize the existing knowledge in their own research work</li> <li>• Ability to link the core concepts of the subject to the field of their own research work.</li> </ul>