

# Programme Outcomes, Programme Specific Outcomes and Course Outcomes For M.Phil Programmes

**Programme Name: M.Phil. in Botany**



Name of the Department  
**University of North Bengal**  
West Bengal, INDIA

### **Programme outcomes**

- The M.Phil course is designed to provide the students with basic and advanced knowledge about the different disciplines of plant sciences.
- Students will be made aware of the scientific temperament and research ethics, so that they can build upon the existing knowledge to pursue a career in research and development.
- Students would be taught to perform literature review, and access different scientific databases so that they can take up any research problems with ease.
- Students will be made aware of the laboratory safety and code of conduct.
- 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 M.Phil course will have an elementary knowledge about the different disciplines of the subject.
- Students will be able to search the internet and scientific databases to accumulate information and latest advances in the field of concerned research topic.
- 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.
- Students will be able to use the major instruments and decide upon the analytical techniques to be used in their research work.
- Students will be aware of the standard code of conduct in research laboratories, plagiarism, and other ethical aspects.
- 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.

## Course outcome

Semester	Course Code	Course Title	
I	Course-I	Research Methodology	<p><b>Knowledge gained:</b></p> <ul style="list-style-type: none"> <li>• Research work and ethics, laboratory safety and practices.</li> <li>• Concept of doing literature review, methods, writing scientific papers.</li> <li>• Conceptual understanding of research ethics, plagiarism, and Intellectual property rights.</li> </ul> <p><b>Skills gained:</b></p> <ul style="list-style-type: none"> <li>• Ability to use the internet and scientific databases to collect information on any scientific topics.</li> <li>• Ability to refrain from plagiarism and follow research ethics and code of conduct.</li> <li>• Ability to follow laboratory safety guidelines.</li> </ul> <p><b>Competency developed:</b></p> <ul style="list-style-type: none"> <li>• At the end of the course, students will be able to read and write scientific articles.</li> <li>• Ability to follow good code of conduct for performing research work.</li> </ul>
II	Course-II	Advanced Course in Botany	<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>

III	Course-III	Analytical Techniques in Plant Sciences	<p><b>Knowledge gained:</b></p> <ul style="list-style-type: none"> <li>• Fundamental knowledge of major instruments.</li> <li>• Concepts of using different techniques and instruments in research work.</li> <li>• Concept of statistical methods.</li> </ul> <p><b>Skills gained:</b></p> <ul style="list-style-type: none"> <li>• Ability to determine the instruments or techniques required to be used for conducting scientific experiments.</li> <li>• Ability to correlate the wet lab experimental results with the bioinformatics analysis.</li> <li>• Ability to perform statistical analysis of the experimental results.</li> </ul> <p><b>Competency developed:</b></p> <ul style="list-style-type: none"> <li>• At the end of this course, students will be able to conduct their own research work.</li> </ul>
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