

*Progressive Education Society's*  
**Modern College of Arts, Science and Commerce (Autonomous),**  
Shivajinagar, Pune – 411005

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**Department of Biotechnology**

**Program Specific Outcomes (PSOs)**

**Program : M.Sc. Biotechnology**

**After successful completion of M.Sc. Biotechnology program, the student will be able to:**

<b>PSO No.</b>	<b>Program Specific Outcomes :</b>
<b>PSO1</b>	<b>Academic Expertise:</b> <ul style="list-style-type: none"><li>i. Biotechnology being multidisciplinary in content, Acquire an understanding of the various aspects of biotechnology such as the fundamental concepts, principles and processes.</li><li>ii. The relation between the various subfields/subjects</li><li>iii. Imbibe an understanding of a wide range of techniques (such as microscopy, sterilization , initiation / maintainance of animal and plant tissue cultures, isolation techniques in - cell, molecular biology microbiology and biochemistry, specialized techniques such as chromatography, electrophoresis and immunology</li></ul>
<b>PSO2</b>	<b>Inquisitive Learner :</b> <ul style="list-style-type: none"><li>i Promote Inquisitiveness and the thinking process towards integration of acquired skills and knowledge</li><li>ii Enable the process of independent thinking in a broad context of social and technology changes</li></ul>
<b>PSO3</b>	<b>Social Competence:</b> <ul style="list-style-type: none"><li>i. Acquire capability , knowledge and skill sets to apply in specific relevant areas such as industrial production, agriculture, health and diagnostics, human welfare and environment</li><li>ii. Engage in multilevel committments to social , health and human welfare</li></ul>
<b>PSO4</b>	<b>Effective Communication :</b>

	<ul style="list-style-type: none"> <li>i Enable the process of sharing knowledge and execute effective communication between various partners in relevant fields</li> </ul>
<b>PSO5</b>	<p><b>Environmental Awareness:</b></p> <ul style="list-style-type: none"> <li>i. Sensitised to environment related issues</li> <li>ii. Understanding of Importance of scientific solutions in societal, environmental related and sustainable development</li> </ul>
<b>PSO6</b>	<p><b>Digital Competence :</b></p> <ul style="list-style-type: none"> <li>i Adequate skill sets and knowledge for use in personal and collaborative development</li> <li>ii Enable to work across interdisciplinary fields</li> </ul>
<b>PSO7</b>	<p><b>Experiential Learning :</b></p> <ul style="list-style-type: none"> <li>i. Application of methodologies and data processing skills in formulating new ideas, procedures</li> <li>ii. Aid understanding the ethical issues and importance of scientific conduct</li> </ul>
<b>PSO8</b>	<p><b>Ethical and Moral Values :</b></p> <ul style="list-style-type: none"> <li>i. Exhibit social tolerance and empathetic social responsibility</li> <li>ii. Capability to act with an awareness of moral and ethical issues</li> </ul>
<b>PSO9</b>	<p><b>Individuality Team work :</b></p> <ul style="list-style-type: none"> <li>i. Use acquired knowledge and competence for individual progress</li> <li>ii. Ability to work in a team with understanding and tolerance</li> <li>iii. Pursue interdisciplinary work/project individually or as a project team</li> </ul>
<b>PSO10</b>	<p><b>Research and Problem Solving Competence :</b></p> <ul style="list-style-type: none"> <li>i. Apply biotechnology methodologies to address research problems and use appropriate skills to seek solutions</li> <li>ii. Integrate statistical and experimental results to authenticate biological data of a research project/ experiment</li> <li>iii. Analyse data obtained and present effectively</li> <li>iv. Demonstrate awareness of ethical issues in research, IPR and issues such as plagiarism</li> </ul>

<b>PSO11</b>	<b>Stress Management :</b> <ul style="list-style-type: none"><li>i. Understand commitments required and importance of self -motivation</li><li>ii. Realise importance of positivity and patience in execution of a scientific problem/exercise</li><li>iii. Understand Importance of physical , mental and intellectual well being</li></ul>
<b>PSO12</b>	<b>Extramural Skills :</b> <ul style="list-style-type: none"><li>i. Sensitisation to importance of varied skills such as sports, music, art etc.</li><li>ii. Acquire skill sets in sports, art, music etc other than program content</li></ul>