

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

**Program Specific Outcomes (POs)**

**Name of the Program : M.Sc. Chemistry**

**After successful completion of M.Sc. Chemistry the student will be able to:**

<b>PSO No.</b>	<b>Program Specific Outcomes</b>
<b>PSO1</b>	<b>Academic Expertise:</b> <ol style="list-style-type: none"><li>i. Have sound knowledge about the fundamentals and applications of chemical and scientific theories.</li><li>ii. Have the understanding of multidisciplinary approach of Science and Technology related to Chemistry.</li></ol>
<b>PSO2</b>	<b>Inquisitive Learner:</b> <ol style="list-style-type: none"><li>i. The Students may re-enact the experience during handling of various instrument which is useful for research.</li><li>ii. Will become familiar with the different branches of chemistry like analytical, organic, inorganic, physical, environmental, polymer and biochemistry.</li></ol>
<b>PSO3</b>	<b>Social Competence:</b> <ol style="list-style-type: none"><li>i. To assess societal, health, safety, and cultural issues relevant to the science practices.</li><li>ii. To provide knowledge and skill to the students thus enabling them to undertake further studies in chemistry in related areas or multidisciplinary areas that can be helpful for self-employment/ entrepreneurship.</li></ol>
<b>PSO4</b>	<b>Effective Communication:</b> <ol style="list-style-type: none"><li>i. Excellent communication skills to transmit complex technical information related to chemistry in a clear and concise written and verbal manner as oral presentations and compilation in the form of scientific reports.</li></ol>
<b>PSO5</b>	<b>Environmental Awareness:</b> <ol style="list-style-type: none"><li>i. Helps in understanding the causes of environmental pollution and can open up new methods for environmental pollution control.</li><li>ii. Advanced knowledge of fundamentals of industrial chemistry with enhanced command over modern scientific</li></ol>

	<p>methods, techniques and chemical processes equipped with environment safety measures.</p>
<p><b>PSO6</b></p>	<p><b>Digital Competence:</b></p> <ul style="list-style-type: none"> <li>i. The course curriculum has been so design to impart a good working knowledge in understanding and carrying out data analysis, use of literacy search tools and use of chemical simulation software and related computational work.</li> <li>ii. Development of digital competences should be regarded as a continuation from instrumental skills towards more productive, communicative, critical and strategic competences. Creatively, independently and ethically.</li> </ul>
<p><b>PSO7</b></p>	<p><b>Experiential Learning:</b></p> <ul style="list-style-type: none"> <li>i. Easily assess the properties of all elements discovered.</li> <li>ii. Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries.</li> <li>iii. Helps in understanding the sophisticated analytical instruments used for the research</li> <li>iv. Helps in understanding the forensic laboratory analysis methods as well as well as for the various laboratories, industries.</li> <li>v. Develops analytical skills and problem solving skills requiring application of chemical principles.</li> <li>vi. Helps in collecting the data as well as in the interpretation of the data using the knowledge gained during the different courses.</li> </ul>
<p><b>PSO8</b></p>	<p><b>Ethical and Moral Values:</b></p> <ul style="list-style-type: none"> <li>i. Students will be able to recognize the ethical component of complex situations.</li> <li>ii. Acquired with awareness of work ethics and ethical issues in scientific research as well as plagiarism policies.</li> </ul>
<p><b>PSO9</b></p>	<p><b>Stress Management:</b></p> <ul style="list-style-type: none"> <li>i. Understanding the nature of materials around us and getting to know the fundamental building blocks of matters with playing ball and sticks model box.</li> <li>ii. Reduce stress by implementing or applying poster presentations in various exhibitions.</li> </ul>

<b>PSO10</b>	<b>Extramural Skills:</b> <ul style="list-style-type: none"><li>i. To helps the students to explore new areas and to develop sustainable innovative solutions for the nation.</li><li>ii. Extramural activities help hone the talents of young minds and gives them an opportunity to develop their specialised skills.</li></ul>