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:

PSO No.	Program Specific Outcomes
PSO1	**Academic Expertise:** i. Have sound knowledge about the fundamentals and applications of chemical and scientific theories. ii. Demonstrating awareness and understanding of ethical standards of their academic discipline and profession. iii. Encouraging students to help build up a progressive and successful career in chemistry. iv. Have the understanding multidisciplinary approach of Science and Technology is related to Chemistry
PSO2	**Inquisitive Learner** i. Inculcating interest and importance of learning advanced techniques and concepts which are beneficial for human welfare. ii. Enrich knowledge through programmes such as seminars, projects, industrial visits, etc. to develop analytical abilities for independent thinking. iii. Developing students' ability and advanced skills to acquire expertise over solving both theoretical and applied chemistry problems. iv. Will become familiar with the different branches of chemistry like analytical, physical, inorganic, organic, polymer, environmental and biochemistry
PSO3	**Social Competence** i. Preparation for CSIR-NET, SET, GATE and other competitive examinations in chemical science. **ii.** Identifying the major problems of the society for which chemistry has offered and can provide solutions and get motivate to further work on it by pursuing research with social responsibility.
PSO4	**Effective Communication** i. Enhancing soft skills through oral presentations and group discussions.
PSO5	**Environmental Awareness**

	i. Increasing awareness and responsibilities towards environment and apply knowledge to solve environmental related issues. **ii.** Understanding environmental dimensions of problems and issues faced by chemists. **iii.** Building-up micro-level experiments using minimal amounts of chemicals. iv. Helps in understanding the causes of environmental pollution and open up new methods for environmental pollution control.
PSO6	**Digital Competence** i. Responsible and competent in managing the internet, studying cyber laws, keeping themselves safe and secure online. ii. Developing e-content through ICT based learning. iii. Knowledge about the different IS standards, encyclopedia's and their use in different chemical analysis.
PSO7	**Experiential Learning** i. Implementing the practical knowledge of basic analytical tools and various laboratory techniques in pharmaceutical and chemical industries. ii. Familiarizing with application of safety and chemical hygiene regulation and practices. iii. Easily assessed the properties of all elements discovered. iv. Helps in understanding the Central Sophisticated Analytical Instrumentation Facility (CSAIF) used for the research purpose as well as for the various laboratories, industries. v. Develop analytical skills and problem solving skills requiring applications of chemical principles. vi. Helps in collecting the data as well as in the interpretation of the data using the knowledge gained during the different courses.
PSO8	**Ethical and Moral Values** i. Exhibit awareness about plagiarism and Intellectual Property Rights (IPR). ii. Helps in understanding the US-FDA norms and Indian pharmaceutical standards and norms.
PSO9	**Team work and Interdisciplinary Studies** **i.** Function as team member and develop projects in multi-disciplinary environment by emulating leadership skills.

	ii. Helps in understanding the forensic laboratories analysis methods as well as understanding the role of forensic laboratories in day to day life.
PSO10	**Research and Problem Solving Competence** i. Applying laboratory skills and critical thinking to develop applications for solving industry oriented programmes. ii. Analyze the nature of problem related to specific research by implementing appropriate skills. iii. Knowledge about the ores of the various elements , their extractions, purification and applications in pharmaceuticals as well as in the research and developments. iv. Acquires the ability to synthesize, separate and characterize compounds using laboratories and instrumentation techniques.
PSO11	**Stress Management** i. Identify stress triggers and how to manage them. ii. Integrate proactive responses to stressful situations. iii. Develop leadership and followership qualities to release the tension, depression and aggression
PSO12	**Extramural Skills** i. Provide opportunities to the students at the institution to develop and display their skills in various physical education activities.