PROGRAM OUTCOMES

M. Sc Chemistry Department

Program Education Objectives (PEOs)

The Program Educational Objectives (PEOs) of M.Sc. Chemistry program are:

- **PEO1:**
  Prepare graduates for successful careers in research and innovation in industry/government organizations and institutions.
- **PEO2:**
  Graduates will be academically prepared to workable and long-lasting solutions for practical issues, become qualified professionals in chemistry, and effectively serve society.
- **PEO3:**
  To develop graduates with leadership qualities, strong communication skills, and professional and ethical values.
- **PEO4:**
  To develop lifelong learners graduates to excel in their professional careers as well as to pursue higher education.

Program Specific Outcomes (PSOs)

The following are the program specific outcomes (PSOs):

- **PSO1:**
  Understand the fundamental chemistry concepts including organic, physical, inorganic, analytical, computational, and nanotechnology.
- **PSO2:**
  Perform procedures as per theory and laboratory standards in the areas of analytical, computational, and green chemistry for efficient and sustainable solutions and will have the skills to design experiments using both traditional and modern methods, as well as awareness of safety rules and standard operating procedures for handling and using chemicals.
- **PSO3:**
  Ability to interpret, synthesize and analyze physical and chemical properties for proposing effective processes and procedures for industries.

Program Outcomes (POs)

- **PO1:**
  Scientific knowledge: Apply chemistry knowledge and chemistry specialties to the solution of challenging scientific issues.
- **PO2:**
  Problem Analysis: Analyze and understand the theoretical and practical data at various workplaces.
- **PO3:**
  Design/ Development of solutions: Design a system, component, or process to meet the desired needs within realistic constraints such as economic, environmental, health and safety, and sustainability.
- **PO4:**
  Conduct investigations of complex problems: Develop the capacity to analyze complicated issues and offer workable answers by applying applied research knowledge.
- **PO5:**
  Modern tool usage: Identifying, formulating, and resolving scientific issues with contemporary methods and technologies.
- **PO6:**
  The chemist and society: Obtain the wide education required to comprehend how scientific solutions impact the local, national, international, economic, environmental, and societal contexts.
- **PO7:**
  Environment and Sustainability: Understand the environmental damage and develop environmental friendly and sustainable scientific practices using the solutions in the societal and environmental context.
- **PO8:**
  Ethics: Develop an ethical-moral value system and cater to the community needs in a voluntary manner by the judicious use of scientific principles.
- **PO9:**
  Multidisciplinary Approach: Develop a multidisciplinary approach and function on multidisciplinary teams.
- **PO10:**
  Communication: Develop various communication skills such as listening, speaking, writing, etc. which will help in the effective expression of ideas and views.
- **PO11:**
  Project Management and Finance: Apply scientific knowledge and management skills to manage projects in industries, research and development institutions, public sector units, higher education and in academia.
- **PO12:**
  Life-long Learning: Demonstrate effective usage of existing resources at workplaces and raise awareness of the importance of life-long learning.