



PROGRAM OUTCOMES

DEPARTMENT OF CHEMISTRY

Program Education Objectives (PEOs)

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

- **PEO1:**
To develop highly competent graduates with strong foundation in all areas of chemistry for successful careers in higher education and research.
- **PEO2:**
To generate critical, creative and scientific skills and encourage the students for innovations to design and develop system/process/product/service to address social and industrial challenges.
- **PEO3:**
To develop graduates with leadership qualities, strong communication skills, professional and ethical values.
- **PEO4:**
To develop lifelong learners graduates to excel in their professional career as well as to pursue higher education.

Program Specific Outcomes (PSOs)

The following are the program specific outcomes (PSOs):

- **PSO1:**
Understand and apply basic concepts of physical, organic, inorganic, analytical, computational and green chemistry.
- **PSO2:**
Perform procedures as per theory and laboratory standards in analytical, computational and green chemistry for efficient and sustainable solutions.
- **PSO3:**
Ability to interpret, synthesize and analyze physical and chemical properties for proposing effective process and procedures for industries.

Program Outcomes (POs)

- **PO1:**
Science knowledge: Apply the knowledge of Physics, Chemistry, and Mathematics in solving/analyzing problems in industries, research and development institutions, public sector units, higher education and in academia.
- **PO2:**
Problem Analysis: Analyze and interpret theoretical and practical data at various work-places.
- **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, manufacturability, and sustainability.
- **PO4:**
Investigations of complex problem: Develop the ability to apply the knowledge of applied research to investigate complex problems and provide viable solutions.
- **PO5:**
Modern tool usage: Identify, formulate, and solve scientific problems using modern tools and techniques.
- **PO6:**
Science and Society: Acquire the broad education necessary to understand the impact of scientific solutions in a local, global, economic, environmental, and societal context.
- **PO7:**
Environment and Sustainability: Assess environmental damage and develop environment friendly and sustainable scientific practices.
- **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 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.