

Programmes

Bachelor of Science (Honors with Research) in Chemistry

Course Intensity: Full Time Programme

Duration: 4 years

About the programme:

Chemistry is important because everything we do is chemistry. Even our body is made of chemicals. Chemical reactions occur when we breathe, eat, or just sit there reading. All matter is made of chemicals, so the importance of chemistry is that it's the study of everything. The program B. Sc. (Hons) Chemistry offers a variety of discipline specific electives, skill enhancement courses, ability enhancement courses, generic elective courses and summer internship in addition to core courses. Students will pursue sixth month's project in different R&D laboratories of national repute. Students will provide a platform to publish research papers under the guidance of faculty members at 4th year. This will enhance the skills of students towards future research and other prospectives.

Eligibility: XIIth with Science with minimum 50% marks.

Tuition fee per annum: 50000

Exam fee per annum: 15000

Programme Objectives (POs):

1. PO1: Critical thinking and analytical reasoning: Acquire ability of critical thinking and logical reasoning and capability of recognizing and distinguishing the various aspects of real-life problems.

2. PO2: Conduct investigations of complex research problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
3. PO3: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex scientific activities with an understanding of the limitations.
4. PO4: Communication: Communicate effectively on scientific activities with the community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
5. PO5: Environment and sustainability: Understand the impact of the professional scientific solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
6. PO6: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the scientific practice.
7. PO7: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
8. PO8: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Programme Specific Outcomes (PSOs):

1. PSO1: Gain knowledge in various branches of chemistry and able to avail the opportunities related to chemistry in the government and private sector services.
2. PSO2: Achieve the knowledge about feasibility and rate of chemical reactions through chemical kinetics, phase equilibrium, kinetic theories of Gases, solid and liquid states, coordination chemistry, metal carbonyls and bioinorganic, which will enable the students to work as chemists in pharmaceutical industries.
3. PSO3: Exhibit technical skills required for synthesis and structural characterization of Organic, Inorganic compounds, polymers and Nanomaterials.

Programme Educational Objectives (PEOs):

1. PEO1: The graduates shall be successful professionals in Academia, Industry, Government and Entrepreneurship.
2. PEO2: The graduates shall pursue higher education/research at institute of national and international repute.
3. PEO3: The graduate shall effectively address the challenges of the society and undertake the projects for bridging the gap between industry and societal needs.

Program Structure:

<https://drive.google.com/drive/u/1/folders/1cmdYynl7HMH2wzrapvzF4rJNfhDo-Bn1>