

Program outcomes (POs) for chemistry students

- i.** A graduate student is expected to be capable of demonstrating comprehensive knowledge and understanding both theoretical and practical knowledge in all disciplines of Chemistry. Students can solve their subjective problems very methodically, independently and finally draw a logical conclusion. Further, the student will be capable of applying modern technologies, handling advanced instruments and Chemistry related soft-wares for chemical analysis, characterization of materials and in separation technology.
- ii.** The course curriculum has been designed in such a manner as to enabling a graduate student to become a skilled project manager by acquiring knowledge about chemistry project management, writing, planning, study of ethical standards and rules and regulations pertaining to scientific project operation.
- iii.** The chemistry graduates are expected to gain knowledge of the fundamental concepts of chemistry and applied chemistry through theory and practical. These fundamental concepts would be reflected in the latest understanding of the field to keep continues its progression.
- iv.** Chemistry graduates are expected to possess minimum standards of communication skills to read and understand documents so that they can solve their problems very methodically, independently and with logical argument.
- v.** Chemistry postgraduates are expected to possess basic psychological skills so that they can deal with individuals and students of various socio-cultural, economic and educational levels.
- vi.** The chemistry postgraduates are expected to be well trained with problem-solving philosophical approaches that are pertinent across the disciplines.
- vii.** The Chemistry postgraduates are expected to possess sufficient knowledge how to synthesize a chemical compound and perform necessary characterization and analysis in support of the formation of the product by using modern analytical tools and advanced technologies. Because of this course curriculum chemistry graduates have lot of opportunity to get job not only in academic and administrative field but also in industry.
- viii.** The Chemistry postgraduates are expected to be more aware about finding green chemical reaction routes for sustainable development. They are expected to maintain good laboratory practices and safety.
- ix.** Students will develop a thorough understanding of the principal of chemistry, including atomic structure chemical bonding chemical reactions, thermodynamics and equilibrium.
- x.** Students will gain experience and proficiency in laboratory techniques such as titration, Spectroscopy, chromatography and Molecular modelling.
- xi.** Students will be able to apply their knowledge of chemistry to Real world problem, such as developing new medicines, designing environmentally friendly materials, or analysing pollutants in water or soil.

- xii.** Graduates may pursue careers in a variety of fields, including Pharmaceutical material science, energy, environmental science and education.
- xiii.** The course as a whole opens up several career doors for the students interested in various areas of science and technology in private, public and government sectors. Students may get job opportunities in higher education, research organizations, chemistry consultancy and many others. Some of the institutions where chemistry students can start their career are: BARC, DRDO, NPTC, IISc, ISRO, ONGC, BHEL, PRL, NPL, SINP, VECC, IITs, NITs, IIPR etc.

Course outcomes (COs) for chemistry students

- ✓ **Educate and train the graduate and postgraduate students in all the theoretical and experimental aspects of chemistry.**
- ✓ **Guide and expose the students for proper handling of the equipments.**
- ✓ **Generate critical, creative and scientific skills and encourage the students for innovations.**
- ✓ **Prepare the students for achieving their goals towards professional life.**
- ✓ **Enhance the academic and professional ethics among students.**
- ✓ **Motivate them towards group activities and team work.**
- ✓ **In addition to developing an expertise in organic, analytical, and computational chemistry, PG students will take benefits in biomedical engineering, civil engineering, computer science, math, and cellular and molecular biology career.**