

PROGRAMME: B.Sc. CHEMISTRY

PROGRAMME OUTCOMES: The core course would help to enrich the subject knowledge of the students and increase their confidence level in the field of both academia and industry.

PO-1: The students will understand the existence of matter in the universe as solids, liquids, and gases which are composed of molecules, atoms and sub atomic particles.

PO-2: Students will learn to estimate inorganic salt mixtures and organic compounds both qualitatively and quantitatively using the classical methods of analysis in practical classes.

PO-3: Students will grasp the mechanisms of different types of reactions both organic and inorganic and will try to predict the products of unknown reactions.

PO-4: Students will learn to synthesize the chemical compounds by the addition of reagents under optimum reaction conditions.

PO-5: B.Sc. Chemistry curriculum is so designed to provide the students a comprehensive understanding about the fundamentals of chemistry covering all the principles and perspectives.

PO-6: The branches of Chemistry such as Organic Chemistry, Inorganic Chemistry, Physical Chemistry and Analytical Chemistry expose the diversified aspects of chemistry where the students experience a broader outlook of the subject.

PO-7: The syllabi of the B.Sc. Chemistry course are discretely classified to give stepwise advancement of the subject knowledge right through the three years of the term.

PO-8: The practical exercises done in the laboratories impart the students the knowledge about various chemical reagents and reactions. Thereby, hone their skills of handling the corrosive, poisonous, explosive and carcinogenic chemicals making themselves employable in any kind of chemical industries. They are also trained about the adverse effects of the obnoxious chemicals and the first aid treatment.

Program Outcomes

PO-1: Disciplinary knowledge and skill: 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.

PO-2: Skilled communicator: The course curriculum incorporates basics and advanced training in order to make a graduate student capable of expressing the subject through technical writing as well as through oral presentation.

PO-3: Critical thinker and problem solver: The course curriculum also includes components that can be helpful to graduate students to develop critical thinking and to design, carry out, record and analyze the results of chemical reactions. Students will be able to think and apply evidence based comparative chemistry approach to explain chemical synthesis and analysis.

PO-4: Sense of inquiry: It is expected that the course curriculum will develop an inquisitive characteristic among the students through appropriate questions, planning and reporting experimental investigation.

PO-5: Team player: The course curriculum has been designed to provide opportunity to act as team player by contributing in laboratory, field based situation and industry.

PO-6: Skilled project manager: 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.

PO-7: Digitally literate: The course curriculum has been so designed to impart a good working knowledge in understanding and carrying out data analysis, use of library search tools, use of chemical simulation software and related computational work.

PO-8: Ethical awareness: A graduate student requires understanding and developing ethical awareness or reasoning which is adequately provided through the course curriculum. Students CO-2: To know how to handle the technical devices for presenting research works. can also create an awareness of the impact of chemistry on the environment, society, and also make development outside the scientific community.

PO-9: Environmental Awareness: As an inhabitant of this green planet a Chemistry graduate student should have many social responsibilities. The course curriculum is designed to teach a Chemistry graduate student to follow the green routes for the synthesis of chemical compounds and also find out new greener routes for sustainable development. The course also helps them to understand the causes of environmental pollution and thereby applying environmental friendly

policies instead of environmentally hazard ones in every aspect.

PO-10: Lifelong learner: The course curriculum is designed to inculcate a habit of learning continuously through use of advanced ICT technique and other available e-techniques, e-books and e-journals for personal academic growth.

PO-11: Analytical skill development and job opportunity: The course curriculum is designed in such a way that Chemistry graduate students can handle many Chemistry based software, decent instruments and advanced technologies to synthesize, characterize and analyze the chemical compounds very skillfully. Such a wonderful practice in the graduate level will bring a good opportunity to the students for getting job in industries besides academic and administrative works.