DEPARTMENT OF CHEMISTRY

P.G COURSE- MSc. CHEMISTRY

PROGRAMME OUTCOME

The MSc. course in chemistry covers two academic years consisting of four semesters and aims to provide the students with an in-depth understanding in various branches of chemistry so as to enable them to choose research areas as per their own interest. The syllabus has been designed to stimulate the research aptitude of students in Chemical Science so as to contribute towards the academic and industrial requirements of the society. As a part of the curriculum, a dissertation work and visit to prestigious R & D institutions is included which helps them to familiarize the nature of various research works and also give ample opportunity to acquaint with eminent researchers as well as scientists from various fields.

PROGRAMME SPECIFIC OTCOME

The chief objective is to strengthen the theoretical as well as the practical knowledge of the student in various research areas in Chemistry. It also aims to equip the students to realize the importance of interdisciplinary science subjects and to explore the possibilities to collaborate them with Chemistry. At the same time the students will be enable to identify and understand the working of various sophisticated instruments.

Semester	Paper Code	Title of paper	Course outcome
1	CH 211	Inorganic Chemistry I	The students get a clear idea about Co-ordination compounds, noble gase, isoploy/heteropoly acids, and interhalogens. The students could be able to familiarize the various analytical testing procedures. The studies on environmental aspects of chemistry enable them to face the burning environmental issues by adopting suitable ecofriendly measures.
1	CH 212	Organic Chemistry I	Make them aware about various reaction mechanisms, reagents and steriochemistry of organic compounds.
1	CH213	Physical Chemistry I	Give the students an authoritative idea on quantum mechanics, Kinetics, Thermodynamics, Photochemistry and Surface Chemistry

2	CH 221	Inorganic Chemistry II	Students get better knowledge on crysatalline compounds, Co-ordination compounds and compounds of elements such as sulphur, nitrogen, phosphorous and boron.
2	CH 222	Organic Chemistry II	Give idea about physical organic chemistry, organic photochemistry, chemistry of natural products and biomolecules.
2	CH 223	Physical Chemistry II	Give advanced level of knowledge on Quantum mechanics & thermodynamics. It also gives an elaborate idea on spectroscopy and electrochemistry.
2	CH 214	Inorganic Chemistry practicals I	Give practical skill on colorimetric, and complexometric estimations. Also equip them to identify the rare earth elements.
2	CH 215	Organic Practicals I	Give opportunity to separate, identify and synthesize various organic compounds.
2	CH 216	Physical Chemistry Practicals I	Enable the students to carry out physical chemistry experiments and thereby to verify the exactness of different theorems and laws in Chemistry.
3	CH 231	Inorganic Chemistry III	Give knowledge in organometallic compounds, bioinorganic compounds, Co-ordination compounds, nuclear chemistry and spectroscopic aspects of inorganic compounds,
3	CH 232	Organic Chemistry III	Give an elaborate idea on methods in organic synthesis, separation techniques and structure elucidation of compounds using spectroscopic studies.
3	CH 233	Physical Chemistry III	Give advanced level of knowledge in quantum mechanics, statistical mechanics, spectroscopic techniques and electrochemistry.
4	CH 241	Chemistry of Advanced Materials	Give advanced knowledge on nanomaterials, smart materials and specialty polymers.
4	CH 242 (b)	Organic Chemistry IV	Give knowledge on medicinal chemistry, supramolecular chemistry, Green chemistry, and polymerchemistry.
4	CH 234	Inorganic Chemistry Practicals II	The student get practical skill on estimation of simple mixture of ions, analysis of alloys and ores. It also enable the students to carryout spectral interpretation of various inorganic compounds
4	CH 235	Organic Practicals II	Could be able to conduct volumetric and colorimetric estimations and spectral identification of various organic compounds.
4	CH 236	Physical practicals II	Enables the students to conduct potentiometric and conductometric titrations and give insight

			into the experiments based on the study of surface tension, viscosity, refractive index parameters.