## About the Subject/ Introduction:

It is very difficult to write the importance of the subject chemistry in a few words. If we take a short journey from the evolution of life to our daily life everywhere there is chemistry: the subject of elements, atoms and molecules, from small to giant network; their conversions of one form into other what we call a chemical reaction. So, to understand the mystery and essence of life one has to study chemistry although for most of the students the subject is itself mysterious. But as we know everything looks puzzling or mysterious until we fully understand and crack it. In past chemistry was treated as a unique discipline of the science subject that only involves the study of matter, its compositions, properties and reactions. Although the core branches are still the same as physical, organic and inorganic chemistry nowadays there are no more distinctions. Rather chemistry provides a foundation for understanding both the basis and applied scientific disciplines at a fundamental level. Below is the brief representation of inter-relation of various subjects with chemistry based on which different academic courses may be opted for further career advancement:



## Tools and techniques used:

Chemistry is an experimental subject. The theories we study or teach in chemistry are obtained by performing numerous experiments and analyzing the data. Undoubtedly the teaching-learning method of the subject would involve some tools and techniques. That's why our course has been divided by theory and practical papers. Demonstration of the subject involves chart like periodic table, 3D models, conventional chalk-duster-board works and also audio and video lectures. In laboratory several scientific instruments are used. Some of them are balances for weighing compounds, glass apparatus like beaker, conical flask, burette, pipette, distillation tools, viscometer, stalagmometer, melting and boiling point measurement apparatus and many more. Modern instruments like spectrophotometer like UV-vis, fluorimeter, spectrometer like atomic absorption (AAS), mass, NMR, IR etc. C,H,N analyser, electrochemistry systems are widely used in various courses of chemistry in academic and industry.

## Scope and career opportunity for the students:

The biggest issue for a student to choose a subject in undergraduate course is its applicability to build up their dream career. And in this context, chemistry is a master subject to choose. We have come across the various interlinked subjects related to chemistry. So, the versatile career options are obvious. Starting from the traditional teacher or scientist to forensic expert a wide variety of jobs can be obtained after studying chemistry in graduate degree. Here a short list is given:

- Basic Research & Development
- Academician
- Analytical Chemist
- Chemical Engineer
- Industrial Management
- Quality Assurance
- QC in Chemical Health & Safety
- Toxicology
- Forensic Expert
- Biotechnologist
- Pharmacologist
- Cheminformatics
- Regulatory Affairs

- Technical Support
- Formulation Chemistry
- Process Chemistry
- Hazardous Waste Management
- Public Safety
- Science Policy

So, what are you looking for? Study chemistry and build up your career.