

## BSc with Chemistry Pass Course

### Program Outcomes

After successful completion of three year degree program in Chemistry a student should be able to;

1. Gain the knowledge of Chemistry through theory and practical's.
2. Demonstrate, solve and an understanding of major concepts in all disciplines of chemistry
3. Solve the problem and also think methodically, independently and draw a logical conclusion.
4. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of chemical reactions.
5. Find out the green route for chemical reaction for sustainable development.
6. Use modern techniques, decent equipments and Chemistry software's
7. Know structure-activity relationship.
8. To make student know about various solution and their importance in our daily life.
9. To expose students about the qualitative and quantitative aspects of chemistry and industrial application of chemistry
10. Understand good laboratory practices and safety.
11. To inculcate the scientific temperament in the students and outside the scientific community.
12. To be familiarized with the emerging areas of Chemistry and their applications in various spheres of Chemical sciences and to apprise the students of its relevance in future studies.


  
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### Course Outcomes

Sr. No.	Subject Code	Subject Name	Subject Category	Course Outcome
<b>BSc First Year</b>				
1.	CHEM101TH CHEM101PR	ATOMIC STRUCTURE, BONDING, GENERAL ORGANIC CHEMISTRY & ALIPHATIC HYDROCARBONS	DSC	In this course, the students will learn regarding the basics about atomic structure and bonding. Organic part gives the insight into the basics of organic chemistry and synthetic organic chemistry of Alkanes, Alkenes and Alkynes
2.	CHEM102TH CHEM102PR	STATES OF MATTER, CHEMICAL KINETICS & FUNCTIONAL ORGANIC CHEMISTRY	DSC	Students gain knowledge about the states of matter i.e. solid, liquid and gases. Students also learn from this course that how to measure the rate of reaction and the factors that affects the rate of the reaction. The organic part gives descriptive knowledge about the synthetic organic chemistry of Alkyl halides, Alcohols phenols and ethers.
<b>BSc Second Year</b>				
3.	CHEM201TH CHEM201PR	SOLUTIONS, PHASE EQUILIBRIUM, CONDUCTANCE ELECTROCHEMISTRY & ORGANIC CHEMISTRY	DSC	This course gives in depth knowledge about various solutions and their importance in our day to day life. Phase Equilibrium part of this course gives the knowledge about the various phases and effect of various physical conditions over phase. Conductance and Electrochemistry part gives knowledge about the reversible and

				irreversible cell along with the pH determination using different electrodes. The organic chemistry part gives detailed overview of the acids and its derivatives along with insights in the carbohydrates.
4.	CHEM202TH CHEM202PR	CHEMISTRY OF MAIN GROUP ELEMENTS, CHEMICAL ENERGETICS ANDEQUILIBRIA	DSC	To educate the students about main group elements of periodic table. Also, the course gives overview of the thermodynamics parameters, the concept of heat, along with the entropy.
5.	CHEM203TH	BASIC ANALYTICAL CHEMISTRY	SEC	This course gives students knowledge about the qualitative and quantitative aspects of analytical chemistry.
6.	CHEM204TH	FUEL CHEMISTRY & CHEMISTRY OF COSMETICS & PERFUMES	SEC	This course helps students in understanding industrial application of fuel chemistry. To learn how to use cosmetic along in day to life is another filed of concern for the students to deal with in this course.
<b>BSc Third Year</b>				
7.	CHEM301TH CHEM301PR	POLYNUCLEAR HYDROCARBONS, DYES, HETEROCYCLIC COMPOUNDS AND SPECTROSCOPY (UV, IR, NMR)	DSE	This course deals with the spectroscopy which deals with the most modern tools in the hands of chemistry for structural elucidation of compound and molecules. It further deals with dyes and polynuclear compounds of practical utility.
8	CHEM305TH CHEM305PR	POLYMER CHEMISTRY	DSE	This course gives knowledge about polymers and their chemical constitution and application in day to

				day life. This course reflects the practical utility and dependence of mankind on polymer industry nowadays and prepares students with basic abilities to have interest in joining this ever-growing industry.
9.	CHEM307	CHEMICAL TECHNOLOGY & SOCIETY AND BUSINESS SKILLS FOR CHEMISTRY	SEC	In this course, students will learn about the benefits of chemistry in society and some business skills in chemical technology.
10	CHEM308	PESTICIDE CHEMISTRY & PHARMACEUTICAL CHEMISTRY	SEC	This course gives students knowledge about the different pesticides and some common pesticides used in agriculture. This course also helps in understanding the basics of pharma industry

  
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