

Master of Science in Chemistry (MSc Chemistry)

Courses Offered :

Department of Chemistry offers following courses

S.No.	Name Of Course	Subject	Level
1.	M.Sc.	Chemistry	PG
2.	B.Sc.	Biotechnology, Microbiology, Chemistry, Physics, Mathematics	UG

Inorganic Chemistry	
At the end of the course students would be able to	
CO1	Predict the nature of bond and its properties through various electronic structural methods; bonding models
CO2	Design new coordination compounds based on a functional understanding of their electronic properties
CO3	Develop the possible catalytic pathways leading to desired products
CO4	Apply the principles of transition metal coordination complexes to derive reaction mechanism
<i>Physical chemistry</i>	
At the end of the course students will be able to	
CO1	Understand, analyze and exercise the principles of classical thermodynamics in various applications
CO2	Understand and execute the quantum mechanical problems and their applications
CO3	Understand the concept of adsorption and its application in surface chemistry
CO4	Analyze and understand the characterization techniques for polymer
CO5	Understand the principles of chemical kinetics and their applications in chemical dynamics
<i>Analytical Separation Techniques</i>	

<i>At the end of the course students will be able to</i>	
CO1	Understand various separation technique based on sample and target analyte
CO2	Elaborate he working principles of various separation techniques
CO3	Apply logic behind working and applicability of each technique
CO4	Identify most suitable separation tool resolution of mixtures
CO5	Develop separation methods for multicomponent analysis
CO6	Evaluate efficiency of separation of mixture based on analysis parameters
<i>Research Methodology</i>	
<i>At the end of the course students will be able to</i>	
CO1	Understand what research is and what is not
CO2	Raise awareness of crucial aspects of the nature of knowledge and the value of scientific method
CO3	Introduce the concept at the heart of every research project the research problem and to discuss what a researchable problem is
CO4	Evaluate literature, form a variety of sources, pertinent to the research objectives
CO5	Identify and justify the basic components of the research framework, relevant to the tackled research problem
CO6	Explain and justify how researchers will collect research data
CO7	Discuss how to cite sources and justify this choice
CO8	Put forward a credible research proposal
CO9	Warn the common mistakes in the field of research methodology