

Study Plan 2023-2024

Study Plan NEP system (July, 2023- Dec, 2023)

SEMESTER-1(MAJOR)

July '23 to September '23					October'23 to December' 23				
Course	Paper Code/Paper Name	Topic	No. of Lect	Faculty	Course	Paper Code/Paper Name	Topic	No. of Lect	Faculty
Major CC-1	CHEM-H-CC1-1-Th	Extra nuclear Structure of atoms and Periodicity	10	SS	Major CC-1	CHEM-H-CC1-1-Th	Stereochemistry-1	05	GM
	Fundamentals of Chemistry - 1	Thermodynamics -1	09	AD		Chemistry - 1	Chemical Kinetics-I	06	AD
		Basics of Organic Chemistry: Bonding and Physical Properties	10	GM			Extra nuclear Structure of atoms and Periodicity	05	SS
		CHEM-H-CC1-1-P	Calibration and use of Apparatus	04			AP	CHEM-H-CC1-1-P	Acid-Base Titrations
		Preparation of Primary standard Solutions	04	AP			Oxidation - Reduction Titrations	12	AP

July '23 to September '23					October'23 to December' 23						
Course Code/ Paper	Paper Code/Paper Name	Topic	No. of Lect	Faculty	Course Code/ Paper	Paper Code/Paper Name	Topic	No. of Lect	Faculty		
Major SEC-1	CHEM-H-SEC1-1-Th	Introduction to Quantitative analysis and its interdisciplinary nature	15	SS	Major SEC-1	CHEM-H-SEC-1-Th	Complexometric Titrimetry and Precipitation Titrimetry	06	AP		
		Quantitative analysis and Basic laboratory Practices	Titrimetric Analysis	02			AP	Quantitative analysis and Basic laboratory Practices	Gravimetric analysis	03	AP
			Acid-Base Titrimetry	03			AP		Redox Titrimetry	02	AP
			Water Analysis	04			AD		Water Treatment Technologies	03	AD
			Basics Laboratory Practices	04			GM		Basics Laboratory Practices	04	GM
	CHEM-H-SEC1-1-Tu	Tutorial	05	AD		CHEM-H-SEC-1-P	Tutorial	03	AD		
			03	GM				04	GM		

SEMESTER-1(MINOR)

July '23 to September '23					October'23 to December' 23				
Course	Paper Code/Paper Name	Topic	No. of Lect	Faculty	Course	Paper Code/Paper Name	Topic	No. of Lect	Faculty
Minor	CHEM-H-CC1-1-Th Chemistry Minor -1	Extra nuclear Structure of atoms and Periodicity	10	SS	Major CC-1	CHEM-H-CC1-1-Th Fundamentals of Chemistry -1	Stereochemistry-1	05	GM
		Thermodynamics -1	09	AD			Chemical Kinetics-I	06	AD
		Basics of Organic Chemistry: Bonding and Physical Properties	10	GM			Extra nuclear Structure of atoms and Periodicity	05	SS
	CHEM-H-CC1-1-P	Calibration and use of Apparatus	4	AP		CHEM-H-CC1-1-P	Acid-Base Titrations	12	AP
		Preparation of Primary standard Solutions	4	AP			Oxidation - Reduction Titrations	12	AP

SEMESTER-1(IDC)

July '23 to September '23					October'23 to December' 23				
Course Code/ Paper	Paper Code/Paper Name	Topic	No. of Lect	Faculty	Course Code/ Paper	Paper Code/Paper Name	Topic	No. of Lect	Faculty
IDC	CHEM-H-IDC1-1-Th Quantitative analysis and Basic laboratory Practices	Introduction to Quantitative analysis and its interdisciplinary nature	15	SS	Major SEC-1	CHEM-H-SEC-1-Th Quantitative analysis and Basic laboratory Practices	Complexometric Titrimetry and Precipitation Titrimetry	06	AP
		Titrimetric Analysis	02	AP			Gravimetric analysis	03	AP
		Acid-Base Titrimetry	03	AP			Redox Titrimetry	02	AP
		Water Analysis	04	AD			Water Treatment Technologies	03	AD
		Basics Laboratory Practices	04	GM			Basics Laboratory Practices	04	GM
		CHEM-H-IDC1-1-Tu	Tutorial	05			AD	CHEM-H-IDC-1-Tu	Tutorial
	03			GM		04	GM		

SEMESTER-3(HONOURS)

CBCS system (July, 2023- Dec, 2023)

July '23 to September '23				October'23 to December' 23			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
CC-5	Chemical Thermodynamics-I	10	AD	CC-5	Applications of Thermodynamics – I	06	AD
	Chemical Thermodynamics II	20	AD		Electrochemistry	24	AD
	PHYSICAL CHEMISTRY PRACTICAL	24	AD		PHYSICAL CHEMISTRY PRACTICAL	21	AD

July '23 to September '23				October'23 to December' 23			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
CC-6	Chemical periodicity	15	AP	CC-6	Coordination Chemistry-I	15	AP
	Chemistry of <i>s</i> and <i>p</i> Block Elements	15	SS		Chemistry of <i>s</i> and <i>p</i> Block Elements	15	SS
	INORGANIC CHEMISTRY PRACTICAL	27	AP		INORGANIC CHEMISTRY PRACTICAL	18	SS

July '23 to September '23				October'23 to December' 23			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
CC-7	Chemistry of alkenes and alkynes	20	GM	CC-7	Carbonyl and Related Compounds	30	GM
	Aromatic Substitution	20	GM		Organometallics	10	GM
	ORGANIC CHEMISTRY PRACTICAL	45	GM		ORGANIC CHEMISTRY PRACTICAL	30	GM

July '23 to September '23				October'23 to December' 23			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
SEC	Clinical Biochemistry	12	GM	SEC	Clinical Biochemistry	12	GM

SEMESTER-3(GENERIC)

July '23 to September '23				October'23 to December' 23			
Course Code/ Paper	Topic	No. of Lect.	Faculty	Course Code/ Paper	Topic	No. of Lect.	Faculty
GE-3	Chemical Bonding and Molecular Structure	8	SS	GE-3	Transition Elements (3d series)	6	SS
	Comparative study of p-block elements:	8	AP		Coordination Chemistry	8	AP
	Ionic Equilibria	6	AD		Electrochemistry	10	AD
	Conductance	6	AD		Aryl Halides	6	GM
	Aromatic Hydrocarbons	6	GM		Organometallic Compounds	6	GM
	Practical	24	SS		Practical	21	SS

SEMESTER-5(HONOURS)

July '23 to September '23				October'23 to December' 23			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
CC-11	Quantum Chemistry-II	15	AD	CC-11	Quantum Chemistry-II	15	AD
	Statistical Thermodynamics	20	AD		Numerical Analysis	10	AD
	PHYSICAL CHEMISTRY PRACTICAL	24	AD		PHYSICAL CHEMISTRY PRACTICAL	21	AD

July '23 to September '23				October'23 to December' 23			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
CC-12	Carbocycles and Heterocycles	16	GM	CC-12	Pericyclic Reactions	08	GM
	Cyclic Stereochemistry	10	GM		Carbohydrates	14	GM
	ORGANIC CHEMISTRY PRACTICAL	45	GM		Biomolecules	12	GM
				ORGANIC CHEMISTRY PRACTICAL	30	GM	

July '23 to September '23				October'23 to December' 23			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
DSE-A	Applications of Computers in Chemistry	30	AD	DSE-A	Applications of Computers in Chemistry	30	AD
DSE-B	Inorganic Materials of Industrial Importance	30	SS	DSE-B	Inorganic Materials of Industrial Importance	30	SS
DSE-A	Practical	24	AD	DSE-A	Practical	21	AD
DSE-B	Practical	24	SS	DSE-B	Practical	21	SS

Study Plan NEP system (January, 2024- June, 2024)

SEMESTER-2 (MAJOR)

July '24 to September '24					October'24 to December' 24				
Course	Paper Code/Paper Name	Topic	No. of Lect	Faculty	Course	Paper Code/Paper Name	Topic	No. of Lect	Faculty
Major CC-2	CHEM-H-CC2-2-Th/ Fundamentals of Chemistry - II	Kinetic Theory and Gaseous State	08	AD	Major CC-1	CHEM-H-CC1-1-Th/ Fundamentals of Chemistry - II	Chemical Bonding-I	07	AP
		Chemical Bonding-I	08	AP			Real Gas and Virial Equation	07	AD
		Stereochemistry-II	08	GM			General Treatment of Reaction mechanism -1	07	GM
	CHEM-H-CC1-1-P	Standardization of $\text{Na}_2\text{S}_2\text{O}_3$ solution against $\text{K}_2\text{Cr}_2\text{O}_7$	3	SS		CHEM-H-CC1-1-P	Estimation of metal content in some selective samples	15	SS
		Iodo-/Iodimetric Titrations	12	SS					

July '24 to September '24					October'24 to December' 24				
Course Code/ Paper	Paper Code/Paper Name	Topic	No. of Lect	Faculty	Course Code/ Paper	Paper Code/Paper Name	Topic	No. of Lect	Faculty
Major SEC-2	CHEM-H-SEC2-2-Th/ Quantitative analysis and Basic laboratory Practices	Module-I Introduction to Artificial Intelligence, Subfields and Technologies	15	GL	Major SEC-1	CHEM-H-SEC-1-Th/ Quantitative analysis and Basic laboratory Practices	Module-II Application of Artificial Intelligence and Ethical and Social implications of AI	08	GL
		Module-II Application of Artificial Intelligence and Ethical and Social implications of AI	07	GL			Module-II Other Important Issues of AI	15	GL

SEMESTER-2(MINOR)

July '24 to September '24					October'24 to December' 24				
Course	Paper Code/Paper Name	Topic	No. of Lect	Faculty	Course	Paper Code/Paper Name	Topic	No. of Lect	Faculty
Minor	CHEM-H-CC2-2-Th/ Chemistry Minor -II	Kinetic Theory and Gaseous State	08	AD	Major CC-1	CHEM-H-CC1-1-Th/ Fundamentals of Chemistry - II	Chemical Bonding-I	07	AP
		Chemical Bonding-I	08	AP			Real Gas and Virial Equation	07	AD
		Stereochemistry-II	08	GM			General Treatment of Reaction mechanism -1	07	GM
	CHEM-H-CC1-1-P	Standardization of $\text{Na}_2\text{S}_2\text{O}_3$ solution against $\text{K}_2\text{Cr}_2\text{O}_7$	3	SS	CHEM-H-CC1-1-P	Estimation of metal content in some selective samples	15	SS	
		Iodo-/Iodimetric Titrations	12	SS					

SEMESTER-2(IDC)

July '23 to September '23					October'23 to December' 23				
Course Code/ Paper	Paper Code/Paper Name	Topic	No. of Lect	Faculty	Course Code/ Paper	Paper Code/Paper Name	Topic	No. of Lect	Faculty
IDC	CHEM-H-IDC2-2-Th Quantitative analysis and Basic laboratory Practices	Introduction to Quantitative analysis and its interdisciplinary nature	15	SS	Major SEC-1	CHEM-H-SEC-1-Th/ Quantitative analysis and Basic laboratory Practices	Complexometric Titrimetry and Precipitation Titrimetry	06	AP
		Titrimetric Analysis	02	AP			Gravimetric analysis	03	AP
		Acid-Base Titrimetry	03	AP			Redox Titrimetry	02	AP
		Water Analysis	04	AD			Water Treatment Technologies	03	AD
		Basics Laboratory Practices	04	GM			Basics Laboratory Practices	04	GM
		CHEM-H-IDC2-2-Tu	Tutorial	05			AD	CHEM-H-SEC-1-P	Tutorial
	03			GM	02	GM			

SEMESTER-4 (HONOURS) CBCS system (January, 2024- June, 2024)

Jan '24 to Mar '24				Apr'24 to Jun' 24			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
CC-8	Nitrogen Compounds	12	GM	CC-8	The Logic of Organic synthesis	14	GM
	Rearrangements	14	GM		Organic Spectroscopy	20	GM
	ORGANIC CHEMISTRY PRACTICAL	27	GM		ORGANIC CHEMISTRY PRACTICAL	18	GM

Jan '24 to Mar '24				Apr'24 to Jun' 24			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
CC-9	Application of Thermodynamics-II	20	AD	CC-9	Foundation of Quantum Mechanics	10	AD
	Foundation of Quantum Mechanics	15	AD		Crystal structure	15	AD
	PHYSICAL CHEMISTRY PRACTICAL	27	AD		PHYSICAL CHEMISTRY PRACTICAL	18	AD

Jan '24 to Mar '24				Apr'24 to Jun' 24			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
CC-10	Coordination Chemistry-II	30	AP	CC-10	Coordination Chemistry-II	15	AP
	Chemistry of d- and f- block elements	15	SS		Reaction Kinetics and Mechanism	10	SS
	INORGANIC CHEMISTRY PRACTICAL	27	SS		INORGANIC CHEMISTRY PRACTICAL	18	SS

Jan '24 to Mar '24				Apr'24 to Jun' 24			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
SEC	Pharmaceutical Chemistry	12	GM	SEC	Pharmaceutical Chemistry	12	GM

SEMESTER-4(GENERIC)

Jan '24 to Mar '24				Apr'24 to Jun' 24			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
GE-4	Alcohol, Phenol and Ethers	15	GM	GE-1	Amino acids and Carbohydrates	8	GM
	Carbonyl Compounds	10	GM		Crystal Field Theory	5	AP
	Carboxylic Acids and Their Derivatives	8	GM		Quantum Chemistry and Spectroscopy	10	AD
	Amines and Diazonium salts	5	GM				
	Practical	27	AP		Practical	18	AP

SEMESTER-6 (HONOURS)

Jan '24 to Mar '24				Apr'24 to Jun' 24			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
CC-13	Theoretical Principal in Qualitative Analysis	10	SS	CC-13	Bioinorganic Chemistry	05	AP
	Bioinorganic Chemistry	20	AP		Organometallic Chemistry	25	SS
	INORGANIC CHEMISTRY PRACTICAL	27	AP		INORGANIC CHEMISTRY PRACTICAL	18	SS

Jan '24 to Mar '24				Apr'24 to Jun' 24			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
CC-14	Molecular Spectroscopy	25	AD	CC-14	Surface Phenomenon	15	AD
	Photochemistry and theory of reaction rate	15	AD		Dipole Moment and Polarizability	05	AD
	PHYSICAL CHEMISTRY PRACTICAL	27	AD		PHYSICAL CHEMISTRY PRACTICAL	18	AD

Jan '23 to Mar '23				Apr'23 to Jun' 23			
Course Code/ Paper	Topic	No. of Lect	Faculty	Course Code/ Paper	Topic	No. of Lect	Faculty
DSE-A	Inorganic Materials of Industrial Importance	30	SS	DSE-A	Inorganic Materials of Industrial Importance	30	SS
DSE-B	Dissertation	60	AP	DSE-B	Dissertation	45	AP
DSE-A	Practical	27	SS	DSE-A	Practical	18	SS