

Details of Syllabus of Odd Semester Hons and General taught by the faculties

SEM 1 (Hons.)

Subject	Topic	Faculty
CEMA-CC-1 INORGANIC CHEMISTRY-1	Extra nuclear Structure of atom	Dr. Manas Kumar Biswas
	Acid-Base reactions	Dr. Ipsita Bhattacharya
	Redox Reactions	Dr. Monoj Kumar Barman
	<i>Acid and Base Titrations</i> <i>Oxidation-Reduction Titrations</i>	Dr. Manas Kumar Biswas Dr. Ipsita Bhattacharya Dr. Monoj Kumar Barman
INORGANIC CHEMISTRY PRACTICAL		
ORGANIC CHEMISTRY-1A	Basics of Organic Chemistry	Dr. Paramita Das
ORGANIC CHEMISTRY PRACTICAL: O (1A)	<i>Separation of components of a binary solid mixture; purification of any one of the separated components by crystallization and determination of its melting point.</i>	Dr. Paramita Das
CEMA-CC-1-2-TH PHYSICAL CHEMISTRY-1	Kinetic Theory of gases & Maxwell's distribution of speed and energy	Dr. Prasenjit Pandey
	Real gas and virial equation & Transport processes	Dr. Srijita Basumallick
	Chemical kinetics	Dr. Niladri Sekhar Karan

<i>PHYSICAL CHEMISTRY-1 PRACTICAL</i>		Dr. Srijita Basumallick
ORGANIC CHEMISTRY-IB	Stereochemistry I & General Treatment of Reaction Mechanism II	Dr. Keya Ghosh
<i>ORGANIC CHEMISTRY PRACTICAL: O (1B)</i>	<i>Determination of boiling point of common organic liquid compounds</i>	Dr. Keya Ghosh

SEM 3 (Hons.)

Subject	Topic	Faculty
CEMA-CC-3-5-TH : PHYSICAL CHEMISTRY	Chemical Thermodynamics I & Chemical Thermodynamics II	Dr. Prasenjit Pandey
	Systems of Variable Composition, Applications of Thermodynamics – I & ELECTROCHEMISTRY - Conductance and transport number	Dr. Niladri Sekhar Karan
	ELECTROCHEMISTRY - Ionic equilibrium & Electromotive Force	Dr. Srijita Basumallick
PHYSICAL CHEMISTRY PRACTICAL		Dr. Prasenjit Pandey Dr. Niladri Sekhar Karan

		Dr. Srijita Basumallick
CEMA-CC-3-6-TH	Chemical periodicity	Dr. Monoj Kumar Barman
INORGANIC CHEMISTRY	Chemistry of <i>s</i> and <i>p</i> Block Elements & Inorganic Polymers	Dr. Manas Kumar Biswas
	Coordination Chemistry-I & Noble Gases	Dr. Ipsita Bhattacharya
INORGANIC CHEMISTRY PRACTICALS	Complexometric titration	Dr. Manas Kumar Biswas, Dr. Ipsita Bhattacharya Dr. Monoj Kumar Barman
	CEMA-CC-3-7-TH :	Dr. Paramita Das
	ORGANIC CHEMISTRY	Chemistry of alkenes and alkynes Aromatic Substitution Organometallic
	Carbonyl and Related Compounds	Dr. Keya Ghosh
ORGANIC CHEMISTRY PRACTICALS	Identification of a Pure Organic Compound Solid compounds Liquid Compounds:	Dr. Keya Ghosh
	B. Quantitative Estimations	Dr. Paramita Das
SEC 2 – ANALYTICAL CLINICAL BIOCHEMISTRY	Carbohydrates Proteins Lipids	Dr. Paramita Das

	Structure of DNA (Watson-Crick model) and RNA, Blood Urine	Smt. Priyanka Mukherjee
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SEM 5 (Hons.)

Subject	Topic	Faculty
CEMA-CC-5-11-TH PHYSICAL CHEMISTRY	a) Quantum Chemistry II- Simple Harmonic Oscillator & Angular momentum b) Computer programs (Using FORTRAN or C or C++) based on numerical methods	Dr. Prasenjit Pandey
	Quantum Chemistry II- Hydrogen atom and hydrogen-like ions, LCAO, Statistical Thermodynamics & Numerical Analysis	Dr. Srijita Basumallick
PHYSICAL CHEMISTRY Practical	Computer programs(Using FORTRAN or C or C++) based on numerical methods :	Dr. Prasenjit Pandey
CEMA-CC-5-12-TH : ORGANIC CHEMISTRY	Carbocycles and Heterocycles Cyclic Stereochemistry	Dr. Paramita Das

	<p>Pericyclic reactions</p> <p>Carbohydrates</p> <p>Biomolecules</p>	Dr. Keya Ghosh
ORGANIC CHEMISTRY PRACTICAL	<p>A. Chromatographic Separations</p> <p>B. Spectroscopic Analysis of Organic Compounds</p>	<p>Dr Keya Ghosh</p> <p>Dr. Paramita Das</p>
DSE-A-2: APPLICATIONS OF COMPUTERS IN CHEMISTRY	<p>Computer Programming Basics (FORTRAN): (Lectures: 20) Elements of FORTRAN Language.</p>	Dr. Prasenjit Pandey
	<p>Introduction to Spreadsheet Software (MS Excel)</p> <p>Statistical Analysis</p>	Dr. Niladri Sekhar Karan
PRACTICALS DSE-A-2:	APPLICATIONS OF COMPUTERS IN CHEMISTRY	Dr. Niladri Sekhar Karan

DSE-B-1:	Silicate Industries	Dr. Ipsita Bhattacharya
INORGANIC MATERIALS OF INDUSTRIAL IMPORTANCE	Fertilizers	
	Surface Coatings	
	Batteries	
	Alloys	Dr. Monoj Kumar Barman
	Catalysis	
	Chemical explosives	
PRACTICALS-DSE B-1: INORGANIC MATERIALS OF INDUSTRIAL IMPORTANCE (45 Lectures)		Dr. Ipsita Bhattacharya & Dr. Monoj Kumar Barman

SEM 1 (Gen.)

Subject	Topic	Faculty
CC1/ GE 1	B. Kinetic Theory of Gases and Real gases	Dr. Prasenjit Pandey
	Liquids	Dr. Srijita Basumallick
	Chemical Kinetics	Dr. Niladri Sekhar Karan
	Atomic Structure	Dr. Manas Kumar Biswas
	Chemical Periodicity	Dr. Monoj Kumar Barman
	Acids and bases	Dr. Ipsita Bhattacharya
	Fundamentals of Organic Chemistry, Stereochemistry & Nucleophilic Substitution and Elimination Reactions	Dr. Paramita Das
<u>CC1/GE1 Practical</u>	Estimation	All Faculties

SEM 3 (Gen.)

Subject	Topic	Faculty
CC3/GE 3	Chemical Bonding and Molecular Structure	Dr. Monoj Kumar Barman
	Comparative study of p-block elements	Dr. Manas Kumar Biswas
	Transition Elements (3d series) & Coordination Chemistry	Dr. Ipsita Bhattacharya
	Ionic Equilibria	Dr. Prasenjit Pandey
	Conductance	Dr. Niladri Sekhar Karan
	Electromotive force	Dr. Srijita Basumallick
	Aromatic Hydrocarbons, Organometallic Compounds & Aryl Halides	Dr. Paramita Das
CC3/GE3 Practical	Qualitative semimicro analysis of mixtures containing two radicals.	All Faculties
SEC A1:	Basic Analytical Chemistry	Dr. Madhusudan Banerjee Dr. Manas Kumar Biswas

SEM 5 (Gen.)

Subject	Topic	Faculty
DSE-A-2: INORGANIC MATERIALS OF INDUSTRIAL IMPORTANCE	Silicate Industries, Fertilizers, Surface Coatings & Batteries	Dr. Ipsita Bhattacharya
	Alloys, Catalysis & Chemical explosives	Dr. Monoj Kumar Barman
PRACTICALS-DSE A2		Dr. Ipsita Bhattacharya Dr. Monoj Kumar Barman