Lesson Plan

LESSON PLAN FOR EVEN SEM (2024)

Department of Chemistry

SOVARANI MEMORIAL COLLEGE

Jagatballavpur, Howrah-711408

Departmental Email ID: head.chem@smc.edu.in

SEMESTER-2 (CCF)

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
1	Four-Year Chemistry Major Course	CHEM-H-CC2-2-Th	Fundamentals Of Chemistry-II	Chemical Bonding - I	15	MKG
				Stereochemistry-II, General Treatment of Reaction Mechanism-I	15	SM
				Kinetic Theory and Gaseous state	15	AM
		CHEM-H-CC2-2-P	Fundamentals Of Chemistry-II	Iodo-/Iodimetric Titrations, Estimation of metal content in some selective samples.	30	MKG
		CHEM-H-SEC2-2-Th	AI for Everyone	Introduction to Artificial Intelligence, Subfields and technologies, Applications of AI.	45	

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
1	Four-Year Chemistry Minor Course	CHEM-H-CC2-2-Th	CHEMISTRY MINOR-II	Chemical Bonding - I	15	MKG
				Stereochemistry-II, General Treatment of Reaction Mechanism-I	15	SM
				Kinetic Theory and Gaseous state	15	AM
		CHEM-H-CC2-2-P	CHEMISTRY MINOR-II	Iodo-/Iodimetric Titrations, Estimation of metal content in some selective samples.	30	MKG

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
1	Three-Year Chemistry MDC Course	CHEM-H-CC2-2-Th	Fundamentals Of Chemistry-II	Chemical Bonding - I	15	MKG
				Stereochemistry-II, General Treatment of Reaction Mechanism-I	15	SM
				Kinetic Theory and Gaseous state	15	AM
		CHEM-H-CC2-2-P	Fundamentals Of Chemistry-II	Iodo-/Iodimetric Titrations, Estimation of metal content in some selective samples.	30	MKG
		CHEM-H-SEC2-2-Th	AI for Everyone	Introduction to Artificial Intelligence, Subfields and technologies, Applications of AI.	45	

SEMESTER-4 (CBCS)

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
4	HONOURS	CEMA-CC-4-8-TH	Organic Chemistry - 4	Nitrogen compounds, Rearrangements, Organic Synthesis, Spectroscopy	60	SM
		CEMA-CC-4-8-P	Organic Practical-4	Qualitative Analysis of Single Solid Organic Compounds	45	SM
		CEMA-CC-4-9-TH	Physical Chemistry- 3	Applications of thermo-dynamics-II, Phase Equilibrium Foundation of Quantum Mechanics, Crystal Structure	60	AM
		CEMA-CC-4-9-P	Physical Chemistry- 3	Kinetic study of inversion of cane sugar, Study of Phase diagram, Determination of partition coefficient, pH-metric titration	45	AM
		CEMA-CC-4-10-TH	Inorganic Chemistry - 4	Coordination Chemistry, d & f elements	60	MKG
		CEMA-CC-4-10-P	Inorganic Chemistry - 4	Coordination Chemistry-II, Chemistry of d- and f- block elements, Lanthanoids and Actinoids, Reaction Kinetics and Mechanism	45	MKG
		CEMA-SEC-B-3	Pharmaceuticals chemistry	Drugs & Pharmaceuticals, Fermentation, Hands on Practical	30	SM

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
4	GENERAL	CC-4 / GE-4	Paper-4	Alcohols, Phenols and Ethers, Carbonyl Compounds, Carboxylic Acids and Their Derivatives, Amines and Diazonium Salts, Amino Acids and Carbohydrates, Crystal Field Theory, Quantum Chemistry & Spectroscopy	60	SM
		CC-4 / GE-4-P	Practical	Qualitative Analysis of Single Solid Organic Compounds	45	SM

SEMESTER-6 (CBCS)

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
6	HONOURS	CEMA-CC-6-13-TH	Inorganic Chemistry-5	Theoretical Principles in Qualitative Analysis, Bioinorganic Chemistry, Organometallic Chemistry, Catalysis by Organometallic Compounds	60	MKG
		CEMA-CC-6-13-P	Inorganic Practical-5	Qualitative semimicro analysis of mixtures containing not more than three radicals	45	MKG
		CEMA-CC-6-14-TH	Physical Chemistry- 5	Molecular Spectroscopy, Photochemistry, Surface phenomenon.	60	AM
		CEMA-CC-6-14-P	Physical Chemistry- 5	Determination of surface tension, Verification of Beer and Lambert's Law, Study of kinetics, Determination of pH of unknown buffer, Determination of CMC.	45	AM
		CEMA-DSE-A-3	Green chemistry and chemistry of natural products	Introduction to Green Chemistry, Principles of Green Chemistry and Designing a Chemical synthesis, Examples of Green Synthesis/ Reactions and some real world cases, Future Trends in Green Chemistry, Alkaloids, Terpenes	60	SM

		CEMA-DSE-A-3	Green Chem Practical	Acetylation of primary amine, Cycloaddition, Preparation of biodiesel, Photoreduction, Pinacol-pinacolone rearrangement, Solid state synthesis of benzilic acid, Benzoin condensation, Base catalysed aldol condensation, Bromination of trans-stilbene, gold nanoparticles synthesis.	**45**	**SM**
		CEMA-DSE-B-4	Dissertation		**60**	**SM**

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
6	**GENERAL**	**CEMG-DSEB-1**	Green chemistry and chemistry of natural products	Introduction to Green Chemistry, Principles of Green Chemistry and Designing a Chemical synthesis, Examples of Green Synthesis/ Reactions and some real world cases, Future Trends in Green Chemistry, Alkaloids, Terpenes	**60**	**SM**
		CEMA-CC-4-8-P	Green Chemistry Practical	Acetylation of primary amine, Cycloaddition, Preparation of biodiesel, Photoreduction, Pinacol-pinacolone rearrangement, Solid state synthesis of benzilic acid, Benzoin condensation, Base catalysed aldol condensation, Bromination of trans-stilbene, gold nanoparticles synthesis.	**45**	**MKG**
		CEMG- SEC 3	Pharmaceuticals chemistry	Drugs & Pharmaceuticals, Fermentation	**30**	**AM**

LESSON PLAN FOR ODD SEM (2024)

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SEMESTER-1 (CCF)

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
1	Four-Year Chemistry Major Course	CHEM-H-CC1-1-Th	Fundamentals Of Chemistry-I	Extra nuclear structure of atoms and Periodicity	15	MKG
				Basics of Organic Chemistry Bonding and Physical Properties , Stereochemistry - I	15	SM
				Thermodynamics -I, Chemical Kinetics-I	15	AM
		CHEM-H-CC1-1-P	Fundamentals Of Chemistry-I	Acid-Base Titration, Oxidation-Reduction Titrimetry.	30	MKG
		CHEM-H-SEC1-1-Th	Quantitative Analysis and Basic Laboratory Practices	Introduction to Quantitative analysis and its interdisciplinary nature, Titrimetric analysis etc. Water analysis, Basic laboratory practices.	45	MKG
		CHEM-H-SEC1-1-Tu	Quantitative Analysis & Basic Laboratory Practices	Tutorial	15	SM

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
1	Four-Year Chemistry Minor Course	CHEM-H-CC1-1-Th	CHEMISTRY MINOR-I	Extra nuclear structure of atoms and Periodicity	15	MKG
				Basics of Organic Chemistry Bonding and Physical Properties , Stereochemistry - I	15	SM
				Thermodynamics -I, Chemical Kinetics-I	15	AM
		CHEM-H-CC1-1-P	CHEMISTRY MINOR-I	Acid-Base Titration, Oxidation-Reduction Titrimetry.	30	MKG

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
1	IDC in Chemistry	CHEM-H-IDC1-1-Th	Quantitative Analysis and Basic Laboratory Practices	Introduction to Quantitative analysis and its interdisciplinary nature, Titrimetric analysis etc. Water analysis, Basic laboratory practices.	45	MKG
		CHEM-H-IDC1-1-Tu	Quantitative Analysis & Basic Laboratory Practices	Tutorial	15	SM

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
1	Three-Year Multidisciplinary Course (CC-1 & CC-2)	CHEM-MD-CC1-1-Th	CHEMISTRY MDC- I	Extra nuclear structure of atoms and Periodicity	15	MKG
				Basics of Organic Chemistry Bonding and Physical Properties , Stereochemistry - I	15	SM
				Thermodynamics -I, Chemical Kinetics-I	15	AM
		CHEM-MD-CC1-1-P	CHEMISTRY MDC- I	Acid-Base Titration, Oxidation-Reduction Titrimetry.	30	MKG

SEMESTER-3 (CCF)

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
3	Four-Year Chemistry Major Course	CHEM-H-CC3-3-Th	Physical Chemistry - I	Thermodynamics-II, Applications of Thermodynamics-I, Electrochemistry-I.	45	AM
		CHEM-H-CC3-3-P	Physical Chemistry - I	Chemical Kinetics (Analytical)	30	AM
		CHEM-H-CC4-3-Th	Organic Chemistry - I	Aromatic Substitution Reaction, General Treatment of Reaction Mechanism-II, Substitution, elimination, Addition to alkenes, dienes, alkynes.	45	SM
		CHEM-H-CC4-3-P	Organic Chemistry - I	Identification of Single Organic Compounds	30	SM
		CHEM-H-SEC3-3-Th	Chemistry in Daily Life	Dairy Products, Food additives, adulterants, and contaminants, Artificial food colorants , Vitamins, Oils and fats, Soaps & Detergents , Chemical and Renewable Energy Sources, Polymers.	45	SM
		CHEM-H-SEC3-3-Tu	Chemistry in Daily Life	Tutorial	15	SM

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
3	Four-Year Chemistry Minor Course	CHEM-H-CC1-3-Th	CHEMISTRY MINOR-I	Extra nuclear structure of atoms and Periodicity	15	MKG
				Basics of Organic Chemistry Bonding and Physical Properties , Stereochemistry - I	15	SM
				Thermodynamics -I, Chemical Kinetics-I	15	AM
		CHEM-H-CC1-3-P	CHEMISTRY MINOR-I	Acid-Base Titration, Oxidation-Reduction Titrimetry.	30	MKG

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
3	IDC in Chemistry	CHEM-H-IDC3-3-Th	Chemistry in Daily Life	Dairy Products, Food additives, adulterants, and contaminants, Artificial food colorants , Vitamins, Oils and fats, Soaps & Detergents , Chemical and Renewable Energy Sources, Polymers	45	SM
		CHEM-H-IDC3-3-Tu	Chemistry in Daily Life	Tutorial	15	SM

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
3	Three-Year Multidisciplinary Course (CC-1 & CC-2)	CHEM-MD-CC3-3-Th	CHEMISTRY MDC- III	Aromatic Substitution Reaction, General Treatment of Reaction Mechanism-II, Substitution, elimination, Addition to alkenes, dienes, alkynes.	45	SM
		CHEM-MD-CC3-3-P	CHEMISTRY MDC- III	Identification of Single organic Compound.	30	SM

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
1	Three-Year Multidisciplinary Course (Minor)	CHEM-MD-CC1-3-Th	CHEMISTRY MDC- I	Extra nuclear structure of atoms and Periodicity	15	MKG
				Basics of Organic Chemistry Bonding and Physical Properties , Stereochemistry - I	15	SM
				Thermodynamics -I, Chemical Kinetics-I	15	AM
		CHEM-MD-CC1-3-P	CHEMISTRY MDC- I	Acid-Base Titration, Oxidation-Reduction Titrimetry.	30	MKG

SEMESTER-5 (CBCS)

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
5	HONOURS	CEMA-CC-5-11-TH	Physical Chemistry - 4	Quantum Chemistry II, Statistical Thermodynamics, Numerical Analysis.	60	AM
		CEMA-CC-5-11-PR	Programming	Computer programs(Using FORTRAN or C or C ++) based on numerical methods	45	AM
		CEMA-CC-5-12-TH	Organic Chemistry -5	Carbocyles and Heterocycles, Cyclic Stereochemistry, Pericyclic reactions, Carbohydrates, Biomolecules	60	SM
		CEMA-CC-5-12-PR	Organic Practical	Chromatographic Separations, Spectroscopic Analysis of Organic Compounds.	45	SM
		CHEA-H-DSE-A2-Th	Applications of computers in chemistry	Computer Programming Basics (FORTRAN), Introduction to Spreadsheet Software(MS Excel), Statistical Analysis	60	AM
		CHEA-H-DSE-A2-PR	Applications of computers in chemistry	Applications of computers in chemistry	45	AM
		CHEA-H-DSE-B1-Th	Inorganic materials of industrial importance	Silicate Industries, Fertilizers, Surface Coatings, Batteries, Alloys, Catalysis, Chemical explosives.	60	MKG
		CHEA-H-DSE-B1-PR	Inorganic materials of industrial importance	Determination of free acidity in fertilizer, composition of dolomite, alloy and cement, Preparation of pigment	45	MKG

SEM	COURSE NAME	PAPER CODE	PAPER NAME	BRIEF DESCRIPTIONS	CLASS	TEACHER
5	GENERAL	CEMG-G-DSE-A2-Th	Inorganic materials of industrial importance	Determination of free acidity in fertilizer, composition of dolomite, alloy and cement, Preparation of pigment	60	MKG
		CEMG-G-DSE-A2-PR	Inorganic materials of industrial importance	Basics of Organic Chemistry Bonding and Physical Properties , Stereochemistry - I	45	MKG
		CEMG-G-SEC-2-Th	Analytical clinical bio-chemistry	Carbohydrates, Proteins, Enzymes, Lipids, Lipoproteins, Biochemistry of disease	30	SM