

**LESSON PLAN FOR THE TEACHERS OF DEPARTMENT OF CHEMISTRY FOR THE ACADEMIC SESSION FROM JULY 2020 TO JUNE 2021 (Online Mode – Covid)**

Class	Name of Teacher	Topics to be covered	No. Of lectures	Examination
B.Sc Hons. Sem-1	Dr. Sitangshu Sekhar Bhattacharjee	<b>Theory</b> CEMA-CC—1-2-TH:  <b>Practical</b> CEMA-CC—1-2-P:  Physical Chemistry P-1 Lab	NA   10	
B.Sc Hons. Sem-2	Dr. Sitangshu Sekhar Bhattacharjee	No Physical Chemistry	N.A.	
B.Sc Hons. Sem-3	Dr. Sitangshu Sekhar Bhattacharjee	<b>Theory</b> CEMA-CC—3-5-TH: Chemical Thermodynamics - 1 Chemical Thermodynamics - 2 System of Variable Composition Application of Thermodynamics - 1  <b>Practical</b> CEMA-CC—3-5-P: Conductometric and Potentiometric Experiments	25     10	
B.Sc Hons. Sem-4	Dr. Sitangshu Sekhar Bhattacharjee	<b>Theory</b> CEMA-CC—4-9-TH: Not Allotted  <b>Practical</b> CEMA-CC—4-9-P: Experiments on Kinetic Study, Phase Diagram, Partition Coefficient, pH-metry	N.A.   30	
B.Sc Hons. Sem-5	Dr. Sitangshu Sekhar Bhattacharjee	<b>DSE-A-2: Application of Computers in Chemistry</b> <b>Theory</b> MS Excel (LINEST, SOLVER, GOALSEEK), Statistical Analysis <b>Practical [H]</b> DSE-A-2 Excel	20  20	

B.Sc Hons. Sem-6	Dr. Sitangshu Sekhar Bhattacharjee	<b>Theory</b> <b>CEMA-CC—6-14-TH:</b> Molecular Spectroscopy Photochemistry  <b>Practical</b> <b>CEMA-CC-6-14-P</b> Experiments on Surface Tension, Spectrophotometry, Kinetics, pH-metry	10       30	
Sem 1	Dr. Sarmila Basu (Sarkar)	<b>Practical [G]</b> <b>CEMG-CC1/GE1-P</b> Titrimetric Experiments	10	
Sem 2	Dr. Sarmila Basu (Sarkar)	<b>Practical [H]</b> <b>CEMA-CC-2-4-P:</b> Iodo/Iodimetric Titrations Estimation of Metal Content in some selective Samples <b>Practical[G]</b> <b>CEMG-CC-2/GE-2:</b> Experiments on kinetic study, Viscosity, Solubility, Buffer, Surface Tension	10       30	
Sem 3	Dr. Sarmila Basu (Sarkar)	<b>Theory [H]</b> <b>SEC-A-2</b> Analytical clinical Biochemistry  <b>Practical [G]</b> <b>CEMG-CC-3/GE3:</b> Qualitative semi micro analysis of mixtures containing two radicals	25       10	
Sem 4	Dr. Sarmila Basu (Sarkar)	<b>Theory [H]</b> <b>SEC-B-3</b> Pharmaceutical Chemistry <b>Theory[G]</b> <b>CEMG-CC4/GE4</b> Alcohols, Phenols, Ethers, Carbonyl Compounds, Carboxylic acid and their derivatives, Amino acids, Carbohydrates <b>Practical [G]</b> <b>CEMG-CC-4/GE4</b> Qualitative analysis of Single solid Organic Compounds, Identification of pure organic compounds.	25       14       30	

Sem 5	Dr. Sarmila Basu (Sarkar)	<b>Theory [H]</b> <b>CEMA-CC-5-12-TH:</b> Biomolecules  <b>Practical [H]</b> <b>CEMA-CC-5-12-P</b> Chromatographic Separation & Spectroscopic analysis of Organic Compounds <b>Theory[G]</b> <b>DSE-A-2</b> Inorganic materials of Industrial Importance	14   10  14	
Sem 6	Dr. Sarmila Basu (Sarkar)	<b>Practical[G]</b> <b>DSE-B-1:</b> Green Chemistry	14	
Sem 1	Dr. Arindam Rana	<b>Theory</b> <b>CEMA-CC—1-1-TH:</b> Extra Nuclear Structure of Atom  <b>Practical</b> <b>CEMA-CC—1-1-P:</b> Acid-Base Titrations Redox Titrations	14   10	
Sem 2	Dr. Arindam Rana	<b>Theory</b> <b>CEMA-CC—2-4-TH:</b> Chemical Bonding-2  <b>Practical</b> <b>CEMA-CC—2-4-P:</b> Iodo-/Iodimetric Titrations Estimation of Metal contents in some selective samples	20   30	
Sem 3	Dr. Arindam Rana	<b>Theory</b> <b>CEMA-CC—3-6-TH:</b> Chemical Periodicity Chemistry of s-block elements Chemistry of p-block elements (Gr. 13-16) Noble Gases  <b>Practical</b> <b>CEMA-CC—3-6-P:</b> Complexometric Titrations Chromatography of Metal ions Gravimetry	30      14	

Sem 4	Dr. Arindam Rana	<b>Theory</b> <b>CEMA-CC—4-10-TH:</b> Coordination Chemistry-II  <b>Practical</b> Not Allotted	20   N.A.	
Sem 5	Dr. Arindam Rana	<b>DSE-B-1: Inorganic Materials of Industrial Importance</b> <b>Theory</b> Silicate Industries Fertilisers Batteries Chemical Explosives  <b>Practical</b>	20       14	
Sem 6	Dr. Arindam Rana	<b>Theory</b> <b>CEMA-CC—6-13-TH:</b> Theoretical Principles of Qualitative Analysis Bioinorganic Chemistry  <b>Practical</b> <b>CEMA-CC—6-13-P:</b> Qualitative Semimicro Analysis	25     30	
B.Sc. Hons, SEM-1	Dr. Biswajit Panda	<b>THEORY</b>  <b>CEMA-CC-1-1-Th:</b> General Treatment Of Reaction Mechanism I <b>CEMA-CC-1-2-Th</b>  Stereochemistry I  General Treatment Of Reaction Mechanism I  Bonding and Physical Properties  <b>PRACTICAL</b> <b>CEMA-CC-1-1,</b> <b>CEMA-CC-1-2</b> Separation of organic solid mixture based on solubility Determination of boiling point of organic liquid	2    15  3  10   15	

<b>B.Sc. Hons, SEM-2</b>	<b>Dr. Biswajit Panda</b>	<b>THEORY CEMA-CC-2-3</b> General Treatment of Reaction Mechanism-II, Free Radical Substitution Reaction & Elimination Reaction	15 15	
		<b>PRACTICAL CEMA-CC-2-3-P</b> Organic Preparations	30	
<b>B.Sc. Hons, SEM-3</b>	<b>Dr. Biswajit Panda</b>	<b>THEORY CC-3-7 TH</b> Chemistry of alkenes and alkynes	12	
		Aromatic Substitution	8	
		Organometallics	4	
		<b>PRACTICAL CC-3-7 P</b> Quantitative Estimation, Identification of a Pure Organic Compound, Solid & Liquid	15	
<b>B.Sc. Hons, SEM-4</b>	<b>Dr. Biswajit Panda</b>	<b>THEORY CEMA-CC-4-8-Th</b> The Logic of Organic Synthesis,	10	
		Nitrogen Compounds, Rearrangements,	20	
		Asymmetric Synthesis	5	
		<b>PRACTICAL CEMA-CC-4-8-P</b> Qualitative Analysis Of single solid organic compound	30	
<b>B.Sc. Hons, SEM-5</b>	<b>Dr. Biswajit Panda</b>	<b>THEORY CC-5-12 TH</b> Heterocyclic Compounds	14	
		Cyclic Stereochemistry	8	
		Pericyclic Reactions	6	
		<b>PRACTICAL CC-5-12 P</b> Chromatographic		

		Separation of Organic Compounds Spectroscopic Analysis of Organic Compounds	15	
<b>B.Sc. Hons, SEM-6</b>	<b>Dr. Biswajit Panda</b>	<b>THEORY</b> <b>DSE-A3</b> Green Chemistry and chemistry of natural products  <b>PRACTICAL</b> <b>DSE-A3</b> Green chemistry  <b>DSEB4</b> <b>Dissertation</b>	30  30  30	
<b>B.Sc. Gen, SEM-6</b>	<b>Dr. Biswajit Panda</b>	<b>THEORY</b> <b>DSE-B1</b> Green Chemistry and chemistry of natural products  <b>PRACTICAL</b> <b>DSE-B1</b> Green chemistry	12  20	
<b>B.Sc Hons. Sem 1</b>	<b>Dr. Pampa Guha</b>	<b>Theory</b> <b>CEMA-CC—1-1-TH:</b> Redox Reactions Acid-Base reactions <b>Practical</b> <b>CEMA-CC—1-1-P:</b> Acid-Base Titrations Redox Titrations	30  10	
<b>B.Sc Hons. Sem 2</b>	<b>Dr. Pampa Guha</b>	<b>Theory</b> <b>CEMA-CC—2-4-TH:</b> Chemical Bonding-1  <b>Practical</b> <b>CEMA-CC—2-4-P:</b> Iodo-/Iodimetric Titrations Estimation of Metal contents in some selective samples	30  30	
<b>B.Sc Hons. Sem 3</b>	<b>Dr. Pampa Guha</b>	<b>Theory</b> <b>CEMA-CC—3-6-TH:</b> Coordination Chemistry-I Chemistry of p-block elements (Gr. 17) Inorganic Polymers: <b>Practical</b> <b>CEMA-CC—3-6-P:</b>	30  14	

		Complexometric Titrations Chromatography of Metal ions Gravimetry		
<b>B.Sc Hons. Sem 4</b>	<b>Dr. Pampa Guha</b>	<b>Theory</b> <b>CEMA-CC—4-10-TH:</b> Transition Elements Lanthanoids and Actinoids Reaction Kinetics and Mechanism <b>Practical</b> Inorganic preparations Instrumental Techniques	30      30	
<b>B.Sc Hons. Sem 5</b>	<b>Dr. Pampa Guha</b>	<b>DSE-B-1: Inorganic Materials of Industrial Importance</b> <b>Theory</b> Surface Coatings: Alloys: Catalysis: Chemical Explosives  <b>Practical</b> PRACTICALS-DSE B-1: INORGANIC MATERIALS OF INDUSTRIAL IMPORTANCE	30       14	
<b>B.Sc Hons. Sem 6</b>	<b>Dr. Pampa Guha</b>	<b>Theory</b> <b>CEMA-CC—6-13-TH:</b> Organometallic Chemistry Catalysis by Organometallic Compounds <b>Practical</b> <b>CEMA-CC—6-13-P:</b> Qualitative Semimicro Analysis	30      30	
<b>B.Sc. Sem 1 HONS</b>	<b>Dr. Shreyasi Dutta</b>	<b>Theory [H]</b> <b>CEMA-CC—1-1A-TH:</b> Bonding and Physical Properties <b>Practical [H]</b> <b>CEMA-CC—1-1-P:</b> Organic Chemistry: O(1A) Lab Separation of Organic Compounds	14    10	
<b>B.Sc. Sem 1 General</b>	<b>Dr. Shreyasi Dutta</b>	<b>Theory [G]</b> <b>CEMG-CC1/GE1</b> Fundamental Organic chemistry	14	

B.Sc Hons. Sem 2	Dr. Shreyasi Dutta	<b>Theory [H]</b> <b>CEMA-CC-2-3-TH:</b> General Treatment of Reaction Mechanism <b>Practical [H]</b> <b>CEMA-CC-2-3-P:</b> Organic Preparations	14 30	
B.Sc Hons. Sem 3	Dr. Shreyasi Dutta	<b>Theory [H]</b> <b>CEMA-CC—3-7-TH:</b> Carbonyl and Related compounds  <b>Practical [H]</b> <b>CEMA-CC—3-5-P:</b> Conductometric and Potentiometric Experiments	14 14	
B.Sc Hons. Sem 4	Dr. Shreyasi Dutta	<b>Theory [H]</b> <b>CEMA-CC—4-8-TH:</b> Organic Spectroscopy  <b>Practical [H]</b> <b>CEMA-CC—4-8-P:</b> Qualitative analysis of Single solid Organic Compounds	14 30	
B.Sc Hons. Sem 5	Dr. Shreyasi Dutta	<b>Theory [H]</b> <b>CEMA-CC-5-11-TH:</b> Quantum Chemistry – II  <b>Practical [H]</b> <b>CEMA-CC-5-12-P</b> Chromatographic Separation & Spectroscopic analysis of Organic Compounds	30 14	
B.Sc Hons. Sem 6	Dr. Shreyasi Dutta	<b>Theory [H]</b> <b>DSE-B-4: Dissertation [H]</b>	30	
B.Sc Hons. Sem 1	Dr. Timir Hajari	<b>Theory [H]</b> <b>CEMA-CC—1-2-TH:</b> Kinetic Theory of Gas <b>Practical [H]</b> <b>CEMA-CC—1-2-P:</b> Physical Chemistry P-1 Lab	20 10	
B.Sc General Sem 1	Dr. Timir Hajari	<b>Theory [G]</b> <b>CEMG-CC1/GE1</b> Kinetic Theory of Gas, Liquid & Stereochemistry <b>Practical [G]</b> <b>CEMG-CC1/GE1</b> Titrimetry	14 10	



B.Sc Hons. Sem 2	Dr. Timir Hajari	<b>Theory [G]</b> <b>CEMG-CC2/GE2</b> Chemical Thermodynamics Chemical Equilibrium <b>Practical [G]</b> <b>CEMG-CC2/GE2</b> Experiments on Kinetic Study, Viscosity, Solubility, Buffer, Surface Tension	14  30	
B.Sc Hons. Sem 3	Dr. Timir Hajari	<b>Theory [H]</b> <b>CEMA-CC—3-5-TH:</b> Electrochemistry  <b>Practical [H]</b> <b>CEMA-CC—3-5-P:</b> Conductometric and Potentiometric Experiments	20  14	
B.Sc Hons. Sem 4	Dr. Timir Hajari	<b>Theory [H]</b> <b>CEMA-CC—4-9-TH:</b> Foundation of Quantum Mechanics Crystal Structure  <b>Practical [H]</b> <b>CEMA-CC—4-9-P:</b> Experiments on Kinetic Study, Phase Diagram, Partition Coefficient, pH-metry  <b>Practical [G]</b> <b>CEMG-CC4/GE4</b> Qualitative analysis and Identification of Organic Compounds	25  30  30	
B.Sc Hons. Sem 5	Dr. Timir Hajari	<b>DSE-A-2: Application of Computers in Chemistry</b> <b>Theory [H]</b> Computer Programming - FORTRAN  <b>Practical [H]</b> <b>DSE-A-2 P</b> Excel <b>CC-5-11-P</b> FORTRAN	14  20 30	
B.Sc Hons. Sem 6	Dr. Timir Hajari	<b>Theory [H]</b> <b>CEMA-CC—6-14-TH:</b> Molecular Spectroscopy <b>DSE-B-4: Dissertation [H]</b>  <b>Practical [H]</b> <b>CEMA-CC-6-14-P:</b> Experiments on Surface Tension, Spectrophotometry	14 30  30	

B.Sc Hons. Sem 1	Mr. Manish Das	<b>Theory [H]</b> <b>CEMA-CC—1-2-TH:</b> Transport process, Chemical kinetics	30	
		<b>Practical [H]</b> <b>CEMA-CC—1-2-P:</b> Physical Chemistry P-1 Lab Experiments on Kinetic Study, Viscosity	10	
		<b>Theory [G]</b> <b>CEMG-CC1/GE1</b> Chemical kinetics, Atomic Structure, Acids and Bases, Periodic table	30	
		<b>Practical [G]</b> <b>CEMG-CC1/GE1</b> Titrimetry	10	
B.Sc Hons. Sem 2	Mr. Manish Das	<b>Theory [G]</b> <b>CEMG-CC2/GE2</b> Solutions, Phase Equilibrium, Solids, Error analysis	14	
		<b>Practical [G]</b> <b>CEMG-CC2/GE2</b> Experiments on Kinetic Study, Viscosity, Solubility, Buffer, Surface Tension	30	
B.Sc Hons. Sem 3	Mr. Manish Das	<b>Theory [H]</b> <b>CEMA-CC—3-5-TH:</b> Electrochemistry 1. Conductance and transport number	14	
		<b>Practical [H]</b> <b>CEMA-CC—3-5-P:</b> Conductometric and Potentiometric Experiments	10	
		<b>Theory [G]</b> <b>CEMG-CC3/GE3</b> Comparative study of p-block elements, Transition elements, Coordination Chemistry	14	
		<b>Practical [G]</b> <b>CEMG-CC3/GE3</b> NIL	N.A.	

B.Sc Hons. Sem 4	Mr. Manish Das	<b>Theory [H]</b> <b>CEMA-CC—4-9-TH:</b> Application of Thermodynamics- II Colligative properties Phase equilibrium  <b>Practical [H]</b> <b>CEMA-CC—4-9-P:</b> Experiments on Kinetic Study, Phase Diagram, Partition Coefficient, pH-metry  <b>Practical [G]</b> <b>CEMG-CC4/GE4</b> NIL	14           30           N.A.	
B.Sc Hons. Sem 5	Mr. Manish Das	<b>CEMA-CC-5-11-TH</b> Statistical Thermodynamics Numerical Analysis  <b>Practical [H]</b> NIL	14           N.A.	
B.Sc Hons. Sem 4	Mr. Manish Das	<b>Theory [H]</b> <b>CEMA-CC—6-14-TH:</b> Surface Phenomenon Adsorption, Colloids, Dipole moment and polarisation  <b>Practical [H]</b> <b>CEMA-CC-6-14-P:</b> Experiments on Surface Tension, Spectrophotometry	14           30	



Signature of Head of the Department  
**Department of Chemistry**  
**City College, Kolkata**

