I – Academic Planner

Teacher's Name: Dr. Vandana Meena

Teaching Plan: 2021-22

Semester: Odd

Department: Chemistry

S. No.	UPC	Paper Name	Core/AECC/GE/SEC	Topic/Unit	Start Date	End Date
1	32173902	Basic Analytical Chemistry	SEC	Basic Analytical Chemistry Introduction: Introduction to Analytical Chemistry and its interdisciplinary nature. Concept of sampling. Importance of accuracy, precision and sources of error in analytical measurements. Presentation of experimental data and results, from the point of view of significant	24.08.2021	21.09.2021

				figures. Chromatography: Definition, general introduction on principles of chromatography, paper chromatography, TLC .	23.10.2020	30.10.2020
2	42177915/16	Analytical Biochemistry	DSE	Biochemistry of disease: A diagnostic approach by blood/ urine analysis. Blood: Composition and functions of blood, blood coagulation. Blood collection and preservation of samples. Anemia Urine: Collection and preservation of samples. Formation of urine. Composition and estimation of constituents of normal and pathological urine. Regulation, estimation and interpretation of data for bilirubin.	28.07.2021 08.09.2021	06.09.2021 27.09.2021
3	32171301	INORGANIC CHEMISTRY – II, s- and p-Block Elements	Core	(Practical) Iodo / Iodimetric Titrations 5. Estimation of Cu(II) and K2Cr2O7 using sodium thiosulphate solution (Iodometrically). 6. Estimation of antimony in tartar-emetic iodimetrically Inorganic preparations 7. Cuprous Chloride, Cu2Cl2	18.08.2021	29.09.2021

				8. Manganese(III) phosphate, MnPO4.H2O 9. Aluminium potassium sulphate KAl(SO4)2.12H2O (Potash alum) or Chrome alum.		

FDP/Seminar/Workshops/Lectures to be attended and/or to be conducted by Teachers

Event Topic	UV- visible spectrometry and its applications				
Type / Nature (FDP/Webinar/Workshop etc.)	Workshop				
Organizing In-charge	Dr. Ram Sunil Lalji				
Details regarding invited Resource Person	**1.** Dr. Kiran Arora Department of Chemistry, KMC **2.** Dr. Ruchi Sharma Pandey Department of Chemistry, KMC				
Nature of Participation (e.g. Invited Speaker, Participant etc.)	Participant				
Date/s	19.07.2021	**Timing/s**	1:40 PM – 4:00 PM	**Mode**	Online

Event Topic	Colloquium on Bio Molecular Chemistry.				
Type / Nature (FDP/Webinar/Workshop etc.)	Colloquium				
Organizing In-charge	Dr. Ram Sunil Lalji				
Details regarding invited Resource Person	**1.** Dr. A.K. Prasad Department of Chemistry **2.** Dr. Vivek K. Sharma Associate Director Technology- Nucleic Acids, MassBiologics, USA				
Nature of Participation (e.g. Invited Speaker, Participant etc.)	Participant				
Date/s	17.09.2021	**Timing/s**	2:45 PM – 4:30 PM	**Mode**	Online

I – Academic Planner

Teacher's Name: Dr. Vandana Meena

Teaching Plan: 2021-22

Semester: Even

Department: Chemistry

S. No.	UPC	Paper Name	Core/AECC/GE/SEC	Topic/Unit	Start Date	End Date
1	32173902	Basic Analytical Chemistry	SEC	Basic Analytical Chemistry Introduction: Introduction to Analytical Chemistry and its interdisciplinary nature. Concept of sampling. Importance of accuracy, precision and sources of error in analytical measurements. Presentation of experimental data and results, from the point of view of significant figures. Analysis of soil: Composition of soil, Concept of pH and pH measurement, Complexometric titrations, Chelation, Chelating agents, use of indicators Analysis of water: Definition of pure water, sources responsible for contaminating water, water sampling methods, water purification methods. Chromatography: Definition, general introduction on principles of chromatography, paper chromatography, TLC etc. Ion-exchange: Column, ion-exchange chromatography etc	04.01.2022	19.04.2022

2	42173923	Basic Analytical Chemistry	SEC	Basic Analytical Chemistry Introduction: Introduction to Analytical Chemistry and its interdisciplinary nature. Concept of sampling. Importance of accuracy, precision and sources of error in analytical measurements. Presentation of experimental data and results, from the point of view of significant figures. Analysis of soil: Composition of soil, Concept of pH and pH measurement, Complexometric titrations, Chelation, Chelating agents, use of indicators Analysis of water: Definition of pure water, sources responsible for contaminating water, water sampling methods, water purification methods. Chromatography: Definition, general introduction on principles of chromatography, paper chromatography, TLC etc. Ion-exchange: Column, ion-exchange chromatography etc	06.01.2022	07.04.2022
3	42173916	Pesticide Chemistry	SEC	Classification, synthesis, structure activity relationship (SAR), mode of action, uses and adverse effects of representative pesticides in the following classes: Organochlorines (DDT, Gammaxene); Quinones (Chloranil), Anilides (Alachlor and Butachlor),	08.01.2022	16.04.2022
5	32173902	Basic Analytical Chemistry	SEC	Basic Analytical Chemistry (Practical) m. Determination of pH of soil samples. n. Estimation of Calcium and Magnesium ions as Calcium carbonate by	08.01.2022	02.04.2022

				complexometric titration. o. Determination of pH, acidity and alkalinity of a water sample. p. Determination of dissolved oxygen (DO) of a water sample. q. Paper chromatographic separation of mixture of metal ion (Ni^{2+} and Co^{2+}). r. Determination of ion exchange capacity of anion / cation exchange resin (using batch procedure if use of column is not feasible).		
6	42177926	Organometallics, Bio-Inorganic Chemistry, Polynuclear Hydrocarbons, UV and IR	DSE	(Practical) Section A: Inorganic Chemistry Separation of mixtures by chromatography: Measure the Rf value in each case. (Combination of two ions to be given) Paper chromatographic separation of Fe3+, Al3+ and Cr3+ *or* Paper chromatographic separation of Ni2+, Co2+, Mn2+ and Zn2+ Preparation of any two of the following complexes and measurement of their conductivity: a. tetraamminecopper (II) sulphate b. potassium trioxalatoferrate (III) trihydrate Compare the conductance of the complexes with that of M/1000 solution of NaCl, MgCl2 and LiCl3. Section B: Organic Chemistry Systematic Qualitative Organic Analysis of Organic Compounds possessing monofunctional groups (carbohydrates, amide, amines, halo	03.01.2022	18.04.2022

				hydrocarbons) and preparation of one derivative.		
7	42177926	Organometallics, Bio-Inorganic Chemistry, Polynuclear Hydrocarbons, UV and IR	DSE	(Practical) Section A: Inorganic Chemistry Separation of mixtures by chromatography: Measure the Rf value in each case. (Combination of two ions to be given) Paper chromatographic separation of Fe3+, Al3+ and Cr3+ *or* Paper chromatographic separation of Ni2+, Co2+, Mn2+ and Zn2+ Preparation of any two of the following complexes and measurement of their conductivity: a. tetraamminecopper (II) sulphate b. potassium trioxalatoferrate (III) trihydrate Compare the conductance of the complexes with that of M/1000 solution of NaCl, MgCl2 and LiCl3. Section B: Organic Chemistry Systematic Qualitative Organic Analysis of Organic Compounds possessing monofunctional groups (amide, amines, carbohydrates, halo hydrocarbons) and preparation of one derivative.	05.01.2022	20.04.2022

FDP/Seminar/Workshops/Lectures to be attended and/or to be conducted by Teachers

Event Topic	Catalysis for Sustainable Chemistry

Type / Nature (FDP/Webinar/Workshop etc.)	Colloquium: International Lecture Series				
Organizing In-charge	Dr. Ram Sunil Lalji				
Nature of Participation (e.g. Invited Speaker, Participant etc.)	Participant				
Date/s	28th Jan, 2022	**Timing/s**	10:00 AM – 12:00 PM	**Mode**	Online

Event Topic	Environmental Sciences and Public Health
Type / Nature (FDP/Webinar/Workshop etc.)	FDP
Organizing In-charge	Dr. Ram Sunil Lalji
Details regarding invited Resource Person	5. Prof. Kaushal Kumar School of Social Sciences, Jawaharlal Nehru University 6. Prof. Kaushal Kumar School of Social Sciences, Jawaharlal Nehru University 7. Prof. Rajiv Tonk Delhi Pharmaceutical Sciences and Research University 8. Dr. Alok Kumar Chaudhari Department of Chemistry, DDU Gorakhpur University 9. Dr. Swati Diwakar Environmental Biology, University of Delhi 10. Dr. Priyanka Saxena Senior Scientist CSIR, NEERI 11. Prof. P. K. Joshi School of Environmental Sciences, Jawaharlal Nehru University 12. Prof. Madhulika Banerjee

		Department of Political Science, University of Delhi 13. Dr. Neetu Rani University School of Environment Management, GGSIPU 14. Prof. V. Madha Suresh Centre for environmental Sciences, University of Madras 15. Prof. Surender Kumar Delhi School of Economics, University of Delhi 16. Dr. Pamposh University School of Environment Management, GGSIPU 17. Mr. Gaurang Baxi Director -Tactise			
Nature of Participation (e.g. Invited Speaker, Participant etc.)		Participant			
Date/s	1st -5th Feb, 2022	**Timing/s**	3:00 PM – 8:30 PM	**Mode**	Online

Internal Assessment: House Exam (Test/Presentation etc.) & Assignment*

Course Code	Course Name	Unique Paper Code	Topic Name	Day and Date	Date/s of Exhibiting the Assessment Sheet to students, Discussing the marks, Returning/Retaining
SEC	B.Sc.(H) Chemistry II Year	32173902	Basic Analytical Chemistry	16.04.2022	23.04.2022
SEC	B.Sc.(LS) II Year	42173923	Basic Analytical Chemistry	21.04.2022	28.04.2022
SEC	B.Sc.(AC) II Year	42173916	Pesticide Chemistry	16.04.2022	23.04.2022

For Departments

A. Department activities for students – Election/Freshers/Welcome/Farewell/Department Seminars/Society functions

Event	Date	Timing	Venue	Event In-charge / Supervisor
Department Election				
Fresher's Welcome				
Farewell				
Department Society functions				
Department Seminars				
Any Other ( )				

B. Outstation Field Visit for Students

Project Name / Paper Name			
Destination		Travel Mode	
Departure Month		Return	
Faculty-in-Charge		Number of Students going	

C. FDP/Seminar/Workshops/Lectures to be attended and/or to be conducted by Department

Event Topic					
Type / Nature (FDP/Webinar/Workshop etc.)					
Organizing In-charge					
Details regarding invited Resource Person					
Nature of Participation (e.g. Invited Speaker, Participant etc.)					
Date/s		Timing/s		Mode	