

I - Academic PlannerTeacher's Name: **Dr. Jai Prakash Chaudhary**, Department: **Chemistry****A - Teaching Plan (2020-2021, Semester: Odd)**

S. No.	UPC	Paper Name	Core/AECC/GE/SEC	Topic/Unit	Start Date	End Date
1	32177901	B.Sc.(H) Chemistry, 3 rd year (Sem-V): Novel Inorganic Solids (Theory)	DSE-1	Basic Introduction to Solid state chemistry, Synthesis of Inorganic Solids	10/08/2020	25/08/2020
				Cationic, anionic, mixed solid electrolytes and their applications, inorganic pigments	31/08/2020	21/09/2020
				One dimensional metal, molecular magnets, Inorganic liquid crystals.	22/09/2020	28/09/2020
				Characterization techniques of inorganic solids	28/09/2020	13/10/2020
				Speciality polymers (conducting polymers), Ion exchange resin	19/10/2020	02/11/2020
				Ceramic & Refractory materials, Composite materials, CNTs, SOFC, YSZs	02/11/2020	24/11/2020
2	32177901	B.Sc.(H) Chemistry, 3 rd year (Sem-V): Novel Inorganic Solids (Practical)	DSE-1	3. Synthesis of Silver nanoparticles	17/08/2020	17/08/2020
				4. Synthesis of Polyaniline	24/08/2020	24/08/2020
				5. Synthesis of pure ZnO and Cu doped ZnO nanoparticles	31/08/2020	31/08/2020
				6. Synthesis of metal sulfides nanoparticles	07/09/2020	07/09/2020
				7. Intercalation of Hydrogen in WO ₃	14/09/2020	14/09/2020
				8. Preparation of Zeolite A and removal of Ca & Mg ions from water	21/09/2020	21/09/2020
				9. Synthesis of Inorganic pigments	28/09/2020	28/09/2020
				10. Assignment/ Mock Test & Viva Preparation	05/10/2020	23/11/2020

3	32173902	B.Sc.(H) CHEMISTRY, 2 nd year (Sem-III): Basic Analytical Chemistry (PRACTICAL)	SEC	1. Paper chromatographic separation of Co^{2+} & Ni^{2+}	22.08.2020	22.08.2020
				2. Complexometric titrations	29.08.2020	29.08.2020
				3. Determination of DO of water sample	04.09.2020	04.09.2020
				4. To study phenolphthalein in trap cases	12.09.2020	12.09.2020
				5. Determination of pH, acidity and alkalinity	19.09.2020	19.09.2020
				6. Determination of pH of soil	19.09.2020	19.09.2020
				7. Spectrophotometric determination of iron	26.09.2020	26.09.2020
				8. Determination of ion exchange capacity of cation/ anion exchange resin	03.10.2020	03.10.2020
				9. Spectrophotometric identification & determination of Caffeine and benzoic acid	10.10.2020	10.10.2020
				10. Estimation of macro-nutrients by flame photometer	17.10.2020	17.10.2020
				11. Analysis of gasoline	24.10.2020	24.10.2020
12. Assignment/ Mock Test & Viva Preparation	31.10.2020	28.11.2020				
4	32171101	B.Sc.(H) Chemistry, I st year (Sem-I): INORGANIC CHEMISTRY-I (THEORY)	CORE	Unit-1: Atomic Structure	18.11.2020	13.01.2020
				Unit-2: Periodicity of Elements	20.01.2021	23.02.2020
				Assignment/ Mock Test	24.02.2021	02.03.2021
5	32171101	B.Sc.(H) Chemistry, I st year (Sem-I): INORGANIC CHEMISTRY-I (PRACTICAL)	CORE	1. Titrimetric Analysis	27.11.2020	04.01.2021
				2. Acid Base Titration	11.12.2020	15.01.2020
				3. Oxidation- reduction Titrimetry	22.01.2021	19.02.2020
				4. Assignment/ Mock Test & Viva Preparation	26.02.2020	05.03.2020

6.	32173908	BSc Analytical Chemistry, 2 nd Year (SEM-III): Green Methods in Chemistry (THEORY)	SEC	<ol style="list-style-type: none"> 1. Introduction to Green chemistry, 12 principle of green chemistry, atom economy and examples of atom economic reactions. 2. Green chemistry challenge award, 3. Solventless process, Real world case studies, Bio-catalysis 	07.11.2020 21.11.2020 26.11.2020	07.11.2020. 21.12.2020 26.11.2020
7.	32173908	BSc Analytical Chemistry, 2 nd Year (SEM-III): Green Methods in Chemistry (PRACTICAL)	SEC	<ol style="list-style-type: none"> 1. Synthesis and characterization of Gold and silver nano particles 2. Preparation and Characterization of Biodiesel from Vegetable oil 3. Solvent free, Microwave Assisted one pot synthesis of Phthalocyanine Complex of Cu (II) 	03.12.2020	03.12.2020

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

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	

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
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DSE-1	B.Sc.(H) Chemistry, III rd year (Sem-V): NOVEL INORGANIC SOLIDS (THEORY)	32177901	Synthesis of Inorganic Solids, Solid electrolytes & Inorganic pigments, One dimensional metal, molecular magnets, Inorganic liquid crystals. Characterization techniques	16/11/2020	December - 2020
CORE	B.Sc.(H) Chemistry, 1 st year (Sem-I): INORGANIC CHEMISTRY-I (THEORY)	32171101	Atomic structure & Periodicity of elements	20/02/2021	February 2021
SEC	BSc Analytical Chemistry, 2 nd Year (SEM-III): Green Methods in Chemistry (THEORY)	32173908	1. Introduction to Green chemistry, 12 principle of green chemistry, atom economy and examples of atom economic reactions. 2. Why do we need green chemistry, Green chemistry challenge award. 3. Solventless process, Real world case studies, Bio-catalysis	28.11.2020	Dec 2020

***Marks of the Internal Assessment to be submitted to the College 15 days before the last working day of every semester**

Organization of Department/College Society Meetings by Staff Advisor/Convener

Department/Society	Meeting Date	Purpose

College Functions

College Function	Function Date	Role to be played

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					
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S. No.	UPC	Course Name	Paper Name	Core/ AEC C/ GE/ SEC	Topic/Unit	Start Date	End Date
1	42174401	B.Sc.(P) Analytical Chemistr, 1st year	Separation Methods II (Theory)	Core	General Introduction of Chromatography, matrix materials, column packing, chromatogram, Van deemter Equation	05.01.2021	16.01.2021
					High performance liquid chromatography, Ion exchange chromatography,	19.01.2021	13.02.2021
					Affinity chromatography, Gel chromatography, Numerical problems, Ion exchange capacity, Adsorption Chromatography and Partition Chromatography	16.02.2021	27.02.2021
					Introduction to electrophoretic techniques, Paper, Cellulose acetate electrophoresis, Agarose gel electrophoresis, 2D Gel Electrophoresis, SDS-PAGE, Support Media, Gradient Gel,	02.03.2021	20.03.2021
					Isoelectric Focussing, Capillary Electrophoresis and Recovery of proteins, Blotting Techniques	03.04.2021	03.04.2021
					Radioisotopes techniques, Biological importance adsorption isotherms, Numerical problems	06.04.2020	10.04.2020
					Test	17.04.2021	17.04.2021

2	32173911	B.Sc.(P) Analytical Chemistry, II year	Pesticide Chemistry (Theory)	SEC	General introduction to pesticides, Benefits & adverse effects, changing concepts of pesticides, Structure & activity relationship	08/01/2021	15/01/2021
					SAR Activity of Acetylcholine, Introduction of Organophosphate, brief about Parathion and Malathion	29/01/2021	05/02/2021
					Carbamates-Carbaryl, Carbofuron	12/02/2021	19.02.2021
					Assignment	26.02.2021	26.02.2021
					Pesticide Formulations including solid and liquid	12.03.2021	09.04.2021
					Test	16.04.2021	16.04.2021
					Lecture of Control Release of Pesticides	23.04.2021	23.04.2021
3	42171204	B.Sc.(P) Analytical Chemistr, 1st year	(Separation Methods-I) (Theory)	Core	Introduction to Filtration, filter medium, Dialysis & types of dialysis, Class test.	05.04.2020	24.05.2020
					Electrodialysis, polycarbonates, Nitrocellulose, fiberglass, General laboratory methods	31.05.2021	21.06.2021
					Solvent extraction techniques, assignment and question practice, numerical practice.	28.06.2021	12.07.2021
4	42177926	BSc (P) Physical Science, 3rd year	Organometal lics, Bio- inorganic Chemistry, Polynuclear Hydrocarbon s and UV, IR	DSE	Introduction to bio inorganic chemistry, Elements in Biological systems and their benefits, Toxicity of metals, Metallobiomolecules, Role of metals in biological systems, Metalloporphyrins, Hemoglobin and Myoglobin	06.01.2021	03.02.2021

					Bohr effect, poisoning of CO, Na-K pump in biological system, Photosynthesis & role of Mg	03.02.2021	24.02.2021
					Assignment on Bio-inorganic Chemistry	03.03.2021	03.03.2021
					Carbonic anhydrase and Role of Ca and Mg in Biological System	10.03.2021	10.03.2021
					General Properties of 3d metals	17.03.2021	31.03.2021
					Internal Assessment	07.04.2021	07.04.2021
					Coordination complexes, colour, shape & chemical properties	28.04.2021	28.04.2021
5	42174404	BSc (P) Life Science, II year	Chemistry of s- and p-block elements, states of matter and chemical kinetics (Practical)	Core	Analysis of mixtures containing 2 cations & 2 anions. Assignment	04.01.2021	28.04.2021
6	42177926	BSc (P) Life Science, III year	Organometallic, Bio-Inorganic Chemistry, Poly Nuclear Hydrocarbons & UV, IR (Practical)	DSE	Qualitative organic analysis of organic compounds possessing monofunctional groups (-COOH, Alcoholic, aldehydic and ketonic group) and preparation of one derivative	02.02.2021	27.04.2021
7	32171601	B.Sc.(H) Chemistry, III year	Inorganic Chemistry-IV (Practical)	CORE	Analysis of mixtures containing 3 cations & 3 anions, Assignment	07.01.2021	29.04.2021

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CBCS	B.Sc.(P) Analytical Chemistry 2 nd year (THEORY)	42174401	Separation Methods-II	Assignment 17.04.2021	May 2021
CBCS	B.Sc.(P) Analytical Chemistry 2 nd year (Theory)	42173916	Pesticide Chemistry	Assignment 16.04.2021	May 2021
CBCS	B.Sc.(P) Analytical Chemistry 1 st year (Theory)	42171204	Separation Methods-I	17.07.2021	July 2021
CBCS	BSc (P) Physical Science, 3 rd year	42177926	Organometallics, Bio-inorganic Chemistry, Polynuclear Hydrocarbons and UV, IR	07.04.2021	May 2021

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