

**Yogoda Satsanga Palpara Mahavidyalaya**

**DEPARTMENT OF CHEMISTRY (General)**

**TEACHING PLANE Chemistry (General) (Session- 2018-19)**

Semester	Paper	Unit/Module		Teacher	No. of lectures	To be completed by
Semester-1	DSC1AT	Inorganic Chemistry-1	Atomic structure	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month
			Chemical Bonding and Molecular Structure	Dr. Sanjib Dey	6	2 <sup>nd</sup> month
			Fundamentals of Organic Chemistry	Sudip Maity	4	1 <sup>st</sup> Month
			Stereochemistry	Sudip Maity	12	2 <sup>nd</sup> month, 3 <sup>rd</sup> month, 4 <sup>th</sup> month
			Aliphatic Hydrocarbons			
	DSC1AP	Inorganic Chemistry	Estimation of Na <sub>2</sub> CO <sub>3</sub> and NaHCO <sub>3</sub> in a mixture	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> Month & 2 <sup>nd</sup> month
			Estimation of oxalic acid by titrating it with KMnO <sub>4</sub>	Dr. Sabyasachi Khatua		
			Estimation of water of crystallization in Mohr's salt by titrating with KMnO <sub>4</sub>	Dr. Sabyasachi Khatua		
			Estimation of Fe (II) ions by titrating it with K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> using internal indicator	Dr. Sabyasachi Khatua		
			Estimation of Cu (II) ions iodometrically using Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Dr. Sabyasachi Khatua		
		Organic Chemistry	Detection of extra elements (N, S, Cl, Br, I) in organic compounds (containing upto two extra elements)	Dr. Sabyasachi Khatua	4	3 <sup>rd</sup> month
			Separation of mixtures by Chromatography: Measure the R <sub>f</sub> value in each case (combination of two compounds to be given)	Dr. Sabyasachi Khatua	4	4 <sup>th</sup> month
Semester-2	DSC1BT	Physical Chemistry-1	Chemical Energetic	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month
			Chemical Equilibrium	Dr. Sabyasachi Khatua	4	2 <sup>nd</sup> month

			Ionic Equilibria:	Dr. Sanjib Dey	6	3 <sup>rd</sup> month
		Organic Chemistry-2	Aromatic hydrocarbons	Sudip Maity	4	1 <sup>st</sup> month
			Alkyl and Aryl Halides	Sudip Maity	6	2 <sup>nd</sup> month
			Alcohols, Phenols and Ethers (Upto 5 Carbons)	Sudip Maity	4	3 <sup>rd</sup> month

			Ethers (aliphatic and aromatic): Aldehydes and ketones (aliphatic and aromatic):	Sudip Maity	6	4 <sup>th</sup> month
	DSC1BP	Physical Chemistry	All	Dr. Sanjib Dey	16	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month
		Organic Chemistry	All			
Semester-3	DSC1CT	Physical Chemistry-2	Solutions	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month
			<b>Conductance</b>	Dr. Sanjib Dey	4	
			Phase equilibria	Dr. Sanjib Dey	6	
			Electrochemistry	Dr. Sabyasachi Khatua	6	
		Organic Chemistry-3	All	Sudip Maity	12	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month

	DSC1CP	Physical Chemistry Lab	Distribution	Dr. Sabyasachi Khatua	15	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup>
			Phase equilibria	Dr. Sabyasachi Khatua		
			Conductance	Dr. Sabyasachi Khatua		
			Potentiometry	Dr. Sabyasachi Khatua		
		Organic Chemistry Lab	All	Dr. Sabyasachi Khatua		4 <sup>th</sup> month
	SEC1T	Basic Analytical Chemistry	Introduction, Analysis of soil, Analysis of water, Analysis of food products, Chromatography, Ion-exchange	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> month
	SEC1P	Basic Analytical Chemistry Lab	All	Dr. Sanjib Dey	8	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month

Semester-IV	DSC1DT	Inorganic Chemistry	Transition Elements (3d series)	Sudip Maity	6	1 <sup>st</sup> and 2 <sup>nd</sup> month
			Coordination Chemistry	Dr. Sanjib Dey	4	3 <sup>rd</sup> month
			Crystal Field Theory	Sudip Maity	5	3 <sup>rd</sup> and 4 <sup>th</sup> month
		Physical Chemistry-3	Kinetic Theory of Gases	Dr. Sanjib Dey	6	1 <sup>st</sup> and 2 <sup>nd</sup> 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Liquids	Dr. Sabyasachi Khatua	4	
			Solids	Dr. Sabyasachi Khatua	4	
			Chemical Kinetics	Dr. Sabyasachi Khatua	6	
	DSC1DP CHEMISTRY (LAB)	Inorganic Chemistry	Semi-micro qualitative analysis	Dr. Sabyasachi Khatua	7	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> month
		Physical Chemistry	Surface tension measurement	Dr. Sabyasachi Khatua	15	2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Viscosity measurement	Dr. Sabyasachi Khatua		
			Chemical Kinetics	Dr. Sabyasachi Khatua		

	SEC2T	Analytical Clinical Biochemistry	Basic understanding of the structures, properties and functions of carbohydrates, lipids and proteins:	Sudip Maity	8	1 <sup>st</sup> , 2 <sup>nd</sup> month
			Biochemistry of disease: A diagnostic approach by blood/urine analysis	Dr. Sabyasachi Khatua	4	3 <sup>rd</sup> month
	SEC2P	Analytical Clinical Biochemistry Lab	Identification and estimation	Dr. Sabyasachi Khatua	8	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month

	DSE1AT: Analytical Methods in Chemistry		Qualitative and quantitative aspects of analysis	Dr. Sabyasachi Khatua	4	1 <sup>st</sup> month
			Optical methods of analysis	Dr. Sabyasachi Khatua	6	2 <sup>nd</sup> month
			Thermal methods of analysis	Dr. Sabyasachi Khatua	6	3 <sup>rd</sup> month
			Electroanalytical methods	Dr. Sanjib Dey	4	4 <sup>th</sup> month
			Separation techniques	Sudip Maity	10	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month
	DSE1AP: Analytical Methods in Chemistry (lab		Separation Techniques	Sudip Maity	08	1 <sup>st</sup> and 2 <sup>nd</sup> month

			Solvent Extractions:	Dr. Sanjib Dey	04	3 <sup>rd</sup> month
			Spectrophotometry	Dr. Sabyasachi Khatua	06	4 <sup>th</sup> and 5 <sup>th</sup> month

	SEC3T	Pharmaceutical Chemistry	Drugs & Pharmaceuticals	Sudip Maity	8	1 <sup>st</sup> and 2 <sup>nd</sup> 3 <sup>rd</sup> month
			Fermentation	Sudip Maity	4	
	SEC3P	Pharmaceutical Chemistry Practical	All	Sudip Maity	04	4 <sup>th</sup> and 5 <sup>th</sup> month
Semester-6	DSE1BT Industrial Chemicals and Environment	Industrial Chemicals and Environment	Industrial Gases & Inorganic Chemicals	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> and 2 <sup>nd</sup> month
			Energy & Environment & Biocatalysis	Dr. Sabyasachi Khatua	6	
			Industrial Metallurgy	Subhajit Das	4	3 <sup>rd</sup> month
			Environment and its segments	Dr. Sanjib Dey	8	2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> month
	DSE1BP Industrial Chemicals and Environment	Industrial Chemicals and Environment Lab	All	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month

	SEC4T	Pesticide Chemistry	All	Sudip Maity	8	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> month
	SEC4P	Pesticide Chemistry Lab	All	Sudip Maity	4	4 <sup>th</sup> month











**Yogoda Satsanga Palpara Mahavidyalaya**

**DEPARTMENT OF CHEMISTRY (General)**

**TEACHING PLANE Chemistry (General) (Session- 2019-20)**

Semester	Paper	Unit/Module	Teacher	No. of lectures	To be completed by	
Semester-1	DSC1AT	Inorganic Chemistry-1	Atomic structure	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month
			Chemical Bonding and Molecular Structure	Dr. Sanjib Dey	6	2 <sup>nd</sup> month
			Fundamentals of Organic Chemistry	Sudip Maity	4	1 <sup>st</sup> Month
			Stereochemistry	Sudip Maity	12	2 <sup>nd</sup> month, 3 <sup>rd</sup> month, 4 <sup>th</sup> month
			Aliphatic Hydrocarbons			
	DSC1AP	Inorganic Chemistry	Estimation of Na <sub>2</sub> CO <sub>3</sub> and NaHCO <sub>3</sub> in a mixture	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> Month & 2 <sup>nd</sup> month
			Estimation of oxalic acid by titrating it with KMnO <sub>4</sub>	Dr. Sabyasachi Khatua		
			Estimation of water of crystallization in Mohr's salt by titrating with KMnO <sub>4</sub>	Dr. Sabyasachi Khatua		
			Estimation of Fe (II) ions by titrating it with K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> using internal indicator	Dr. Sabyasachi Khatua		
			Estimation of Cu (II) ions iodometrically using Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Dr. Sabyasachi Khatua		
		Organic Chemistry	Detection of extra elements (N, S, Cl, Br, I) in organic compounds (containing upto two extra elements)	Dr. Sabyasachi Khatua	4	3 <sup>rd</sup> month
			Separation of mixtures by Chromatography: Measure the R <sub>f</sub> value in each case (combination of two compounds to be given)	Dr. Sabyasachi Khatua	4	4 <sup>th</sup> month
Semester-2	DSC1BT	Physical Chemistry-1	Chemical Energetic	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month
			Chemical Equilibrium	Dr. Sabyasachi Khatua	4	2 <sup>nd</sup> month
			Ionic Equilibria:	Dr. Sanjib Dey	6	3 <sup>rd</sup> month

		Organic Chemistry-2	Aromatic hydrocarbons	Sudip Maity	4	1 <sup>st</sup> month
			Alkyl and Aryl Halides	Sudip Maity	6	2 <sup>nd</sup> month
			Alcohols, Phenols and Ethers (Upto 5 Carbons)	Sudip Maity	4	3 <sup>rd</sup> month

			Ethers (aliphatic and aromatic): Aldehydes and ketones (aliphatic and aromatic):	Sudip Maity	6	4 <sup>th</sup> month
	DSC1BP	Physical Chemistry	All	Dr. Sanjib Dey	16	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month
		Organic Chemistry	All			
Semester-3	DSC1CT	Physical Chemistry-2	Solutions	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month
			<b>Conductance</b>	Dr. Sanjib Dey	4	
			Phase equilibria	Dr. Sanjib Dey	6	
			Electrochemistry	Dr. Sabyasachi Khatua	6	
		Organic Chemistry-3	All	Sudip Maity	12	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month

	DSC1CP	Physical Chemistry Lab	Distribution	Dr. Sabyasachi Khatua	15	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup>
			Phase equilibria	Dr. Sabyasachi Khatua		
			Conductance	Dr. Sabyasachi Khatua		
			Potentiometry	Dr. Sabyasachi Khatua		
		Organic Chemistry Lab	All	Dr. Sabyasachi Khatua		4 <sup>th</sup> month
	SEC1T	Basic Analytical Chemistry	Introduction, Analysis of soil, Analysis of water, Analysis of food products, Chromatography, Ion-exchange	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> month
	SEC1P	Basic Analytical Chemistry Lab	All	Dr. Sanjib Dey	8	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month

Semester-IV	DSC1DT	Inorganic Chemistry	Transition Elements (3d series)	Sudip Maity	6	1 <sup>st</sup> and 2 <sup>nd</sup> month
			Coordination Chemistry	Dr. Sanjib Dey	4	3 <sup>rd</sup> month
			Crystal Field Theory	Sudip Maity	5	3 <sup>rd</sup> and 4 <sup>th</sup> month
		Physical Chemistry-3	Kinetic Theory of Gases	Dr. Sanjib Dey	6	1 <sup>st</sup> and 2 <sup>nd</sup> 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Liquids	Dr. Sabyasachi Khatua	4	
			Solids	Dr. Sabyasachi Khatua	4	
			Chemical Kinetics	Dr. Sabyasachi Khatua	6	
	DSC1DP CHEMISTRY (LAB)	Inorganic Chemistry	Semi-micro qualitative analysis	Dr. Sabyasachi Khatua	7	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> month
		Physical Chemistry	Surface tension measurement	Dr. Sabyasachi Khatua	15	2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Viscosity measurement	Dr. Sabyasachi Khatua		
			Chemical Kinetics	Dr. Sabyasachi Khatua		

	SEC2T	Analytical Clinical Biochemistry	Basic understanding of the structures, properties and functions of carbohydrates, lipids and proteins:	Sudip Maity	8	1 <sup>st</sup> , 2 <sup>nd</sup> month
			Biochemistry of disease: A diagnostic approach by blood/urine analysis	Dr. Sabyasachi Khatua	4	3 <sup>rd</sup> month
	SEC2P	Analytical Clinical Biochemistry Lab	Identification and estimation	Dr. Sabyasachi Khatua	8	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month

	DSE1AT: Analytical Methods in Chemistry		Qualitative and quantitative aspects of analysis	Dr. Sabyasachi Khatua	4	1 <sup>st</sup> month
			Optical methods of analysis	Dr. Sabyasachi Khatua	6	2 <sup>nd</sup> month
			Thermal methods of analysis	Dr. Sabyasachi Khatua	6	3 <sup>rd</sup> month
			Electroanalytical methods	Dr. Sanjib Dey	4	4 <sup>th</sup> month
			Separation techniques	Sudip Maity	10	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month
	DSE1AP: Analytical Methods in Chemistry (lab		Separation Techniques	Sudip Maity	08	1 <sup>st</sup> and 2 <sup>nd</sup> month



			Solvent Extractions:	Dr. Sanjib Dey	04	3 <sup>rd</sup> month
			Spectrophotometry	Dr. Sabyasachi Khatua	06	4 <sup>th</sup> and 5 <sup>th</sup> month

	SEC3T	Pharmaceutical Chemistry	Drugs & Pharmaceuticals	Sudip Maity	8	1 <sup>st</sup> and 2 <sup>nd</sup> 3 <sup>rd</sup> month
			Fermentation	Sudip Maity	4	
	SEC3P	Pharmaceutical Chemistry Practical	All	Sudip Maity	04	4 <sup>th</sup> and 5 <sup>th</sup> month
Semester-6	DSE1BT Industrial Chemicals and Environment	Industrial Chemicals and Environment	Industrial Gases & Inorganic Chemicals	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> and 2 <sup>nd</sup> month
			Energy & Environment & Biocatalysis	Dr. Sabyasachi Khatua	6	
			Industrial Metallurgy	Subhajit Das	4	3 <sup>rd</sup> month
			Environment and its segments	Dr. Sanjib Dey	8	2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> month
	DSE1BP Industrial Chemicals and Environment	Industrial Chemicals and Environment Lab	All	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month

	SEC4T	Pesticide Chemistry	All	Sudip Maity	8	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> month
	SEC4P	Pesticide Chemistry Lab	All	Sudip Maity	4	4 <sup>th</sup> month









**Yogoda Satsanga Palpara Mahavidyalaya**

**DEPARTMENT OF CHEMISTRY (General)**

**TEACHING PLANE Chemistry (General) (Session- 2020-21)**

Semester	Paper	Unit/Module		Teacher	No. of lectures	To be completed by
Semester-1	DSC1AT	Inorganic Chemistry-1	Atomic structure	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month
			Chemical Bonding and Molecular Structure	Dr. Sanjib Dey	6	2 <sup>nd</sup> month
			Fundamentals of Organic Chemistry	Sudip Maity	4	1 <sup>st</sup> Month
			Stereochemistry	Sudip Maity	12	2 <sup>nd</sup> month, 3 <sup>rd</sup> month, 4 <sup>th</sup> month
			Aliphatic Hydrocarbons			
	DSC1AP	Inorganic Chemistry	Estimation of Na <sub>2</sub> CO <sub>3</sub> and NaHCO <sub>3</sub> in a mixture	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> Month & 2 <sup>nd</sup> month
			Estimation of oxalic acid by titrating it with KMnO <sub>4</sub>	Dr. Sabyasachi Khatua		
			Estimation of water of crystallization in Mohr's salt by titrating with KMnO <sub>4</sub>	Dr. Sabyasachi Khatua		
			Estimation of Fe (II) ions by titrating it with K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> using internal indicator	Dr. Sabyasachi Khatua		
			Estimation of Cu (II) ions iodometrically using Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Dr. Sabyasachi Khatua		
		Organic Chemistry	Detection of extra elements (N, S, Cl, Br, I) in organic compounds (containing upto two extra elements)	Dr. Sabyasachi Khatua	4	3 <sup>rd</sup> month
			Separation of mixtures by Chromatography: Measure the R <sub>f</sub> value in each case (combination of two compounds to be given)	Dr. Sabyasachi Khatua	4	4 <sup>th</sup> month
Semester-2	DSC1BT	Physical Chemistry-1	Chemical Energetic	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month
			Chemical Equilibrium	Dr. Sabyasachi Khatua	4	2 <sup>nd</sup> month
			Ionic Equilibria:	Dr. Sanjib Dey	6	3 <sup>rd</sup> month

		Organic Chemistry-2	Aromatic hydrocarbons	Sudip Maity	4	1 <sup>st</sup> month
			Alkyl and Aryl Halides	Sudip Maity	6	2 <sup>nd</sup> month
			Alcohols, Phenols and Ethers (Upto 5 Carbons)	Sudip Maity	4	3 <sup>rd</sup> month

			Ethers (aliphatic and aromatic): Aldehydes and ketones (aliphatic and aromatic):	Sudip Maity	6	4 <sup>th</sup> month
	DSC1BP	Physical Chemistry	All	Dr. Sanjib Dey	16	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month
		Organic Chemistry	All			
Semester-3	DSC1CT	Physical Chemistry-2	Solutions	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month
			<b>Conductance</b>	Dr. Sanjib Dey	4	
			Phase equilibria	Dr. Sanjib Dey	6	
			Electrochemistry	Dr. Sabyasachi Khatua	6	
		Organic Chemistry-3	All	Sudip Maity	12	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month



	DSC1CP	Physical Chemistry Lab	Distribution	Dr. Sabyasachi Khatua	15	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup>
			Phase equilibria	Dr. Sabyasachi Khatua		
			Conductance	Dr. Sabyasachi Khatua		
			Potentiometry	Dr. Sabyasachi Khatua		
		Organic Chemistry Lab	All	Dr. Sabyasachi Khatua		4 <sup>th</sup> month
	SEC1T	Basic Analytical Chemistry	Introduction, Analysis of soil, Analysis of water, Analysis of food products, Chromatography, Ion-exchange	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> month
	SEC1P	Basic Analytical Chemistry Lab	All	Dr. Sanjib Dey	8	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month

Semester-IV	DSC1DT	Inorganic Chemistry	Transition Elements (3d series)	Sudip Maity	6	1 <sup>st</sup> and 2 <sup>nd</sup> month
			Coordination Chemistry	Dr. Sanjib Dey	4	3 <sup>rd</sup> month
			Crystal Field Theory	Sudip Maity	5	3 <sup>rd</sup> and 4 <sup>th</sup> month
		Physical Chemistry-3	Kinetic Theory of Gases	Dr. Sanjib Dey	6	1 <sup>st</sup> and 2 <sup>nd</sup> 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Liquids	Dr. Sabyasachi Khatua	4	
			Solids	Dr. Sabyasachi Khatua	4	
			Chemical Kinetics	Dr. Sabyasachi Khatua	6	
	DSC1DP CHEMISTRY (LAB)	Inorganic Chemistry	Semi-micro qualitative analysis	Dr. Sabyasachi Khatua	7	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> month
		Physical Chemistry	Surface tension measurement	Dr. Sabyasachi Khatua	15	2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Viscosity measurement	Dr. Sabyasachi Khatua		
			Chemical Kinetics	Dr. Sabyasachi Khatua		

	SEC2T	Analytical Clinical Biochemistry	Basic understanding of the structures, properties and functions of carbohydrates, lipids and proteins:	Sudip Maity	8	1 <sup>st</sup> , 2 <sup>nd</sup> month
			Biochemistry of disease: A diagnostic approach by blood/urine analysis	Dr. Sabyasachi Khatua	4	3 <sup>rd</sup> month
	SEC2P	Analytical Clinical Biochemistry Lab	Identification and estimation	Dr. Sabyasachi Khatua	8	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month

	DSE1AT: Analytical Methods in Chemistry		Qualitative and quantitative aspects of analysis	Dr. Sabyasachi Khatua	4	1 <sup>st</sup> month
			Optical methods of analysis	Dr. Sabyasachi Khatua	6	2 <sup>nd</sup> month
			Thermal methods of analysis	Dr. Sabyasachi Khatua	6	3 <sup>rd</sup> month
			Electroanalytical methods	Dr. Sanjib Dey	4	4 <sup>th</sup> month
			Separation techniques	Sudip Maity	10	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month
	DSE1AP: Analytical Methods in Chemistry (lab		Separation Techniques	Sudip Maity	08	1 <sup>st</sup> and 2 <sup>nd</sup> month

			Solvent Extractions:	Dr. Sanjib Dey	04	3 <sup>rd</sup> month
			Spectrophotometry	Dr. Sabyasachi Khatua	06	4 <sup>th</sup> and 5 <sup>th</sup> month

	SEC3T	Pharmaceutical Chemistry	Drugs & Pharmaceuticals	Sudip Maity	8	1 <sup>st</sup> and 2 <sup>nd</sup> 3 <sup>rd</sup> month
			Fermentation	Sudip Maity	4	
	SEC3P	Pharmaceutical Chemistry Practical	All	Sudip Maity	04	4 <sup>th</sup> and 5 <sup>th</sup> month
Semester-6	DSE1BT Industrial Chemicals and Environment	Industrial Chemicals and Environment	Industrial Gases & Inorganic Chemicals	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> and 2 <sup>nd</sup> month
			Energy & Environment & Biocatalysis	Dr. Sabyasachi Khatua	6	
			Industrial Metallurgy	Subhajit Das	4	3 <sup>rd</sup> month
			Environment and its segments	Dr. Sanjib Dey	8	2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> month
	DSE1BP Industrial Chemicals and Environment	Industrial Chemicals and Environment Lab	All	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month

	SEC4T	Pesticide Chemistry	All	Sudip Maity	8	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> month
	SEC4P	Pesticide Chemistry Lab	All	Sudip Maity	4	4 <sup>th</sup> month











**Yogoda Satsanga Palpara Mahavidyalaya**

**DEPARTMENT OF CHEMISTRY (General)**

**TEACHING PLANE Chemistry (General) (Session- 2021-22)**

Semester	Paper	Unit/Module	Teacher	No. of lectures	To be completed by	
Semester-1	DSC1AT	Inorganic Chemistry-1	Atomic structure	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month
			Chemical Bonding and Molecular Structure	Dr. Sanjib Dey	6	2 <sup>nd</sup> month
			Fundamentals of Organic Chemistry	Sudip Maity	4	1 <sup>st</sup> Month
			Stereochemistry	Sudip Maity	12	2 <sup>nd</sup> month, 3 <sup>rd</sup> month, 4 <sup>th</sup> month
			Aliphatic Hydrocarbons			
	DSC1AP	Inorganic Chemistry	Estimation of Na <sub>2</sub> CO <sub>3</sub> and NaHCO <sub>3</sub> in a mixture	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> Month & 2 <sup>nd</sup> month
			Estimation of oxalic acid by titrating it with KMnO <sub>4</sub>	Dr. Sabyasachi Khatua		
			Estimation of water of crystallization in Mohr's salt by titrating with KMnO <sub>4</sub>	Dr. Sabyasachi Khatua		
			Estimation of Fe (II) ions by titrating it with K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> using internal indicator	Dr. Sabyasachi Khatua		
			Estimation of Cu (II) ions iodometrically using Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Dr. Sabyasachi Khatua		
		Organic Chemistry	Detection of extra elements (N, S, Cl, Br, I) in organic compounds (containing upto two extra elements)	Dr. Sabyasachi Khatua	4	3 <sup>rd</sup> month
			Separation of mixtures by Chromatography: Measure the R <sub>f</sub> value in each case (combination of two compounds to be given)	Dr. Sabyasachi Khatua	4	4 <sup>th</sup> month
Semester-2	DSC1BT	Physical Chemistry-1	Chemical Energetic	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month
			Chemical Equilibrium	Dr. Sabyasachi Khatua	4	2 <sup>nd</sup> month
			Ionic Equilibria:	Dr. Sanjib Dey	6	3 <sup>rd</sup> month

		Organic Chemistry-2	Aromatic hydrocarbons	Sudip Maity	4	1 <sup>st</sup> month
			Alkyl and Aryl Halides	Sudip Maity	6	2 <sup>nd</sup> month
			Alcohols, Phenols and Ethers (Upto 5 Carbons)	Sudip Maity	4	3 <sup>rd</sup> month

			Ethers (aliphatic and aromatic): Aldehydes and ketones (aliphatic and aromatic):	Sudip Maity	6	4 <sup>th</sup> month
	DSC1BP	Physical Chemistry	All	Dr. Sanjib Dey	16	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month
		Organic Chemistry	All			
Semester-3	DSC1CT	Physical Chemistry-2	Solutions	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month
			<b>Conductance</b>	Dr. Sanjib Dey	4	
			Phase equilibria	Dr. Sanjib Dey	6	
			Electrochemistry	Dr. Sabyasachi Khatua	6	
		Organic Chemistry-3	All	Sudip Maity	12	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month

	DSC1CP	Physical Chemistry Lab	Distribution	Dr. Sabyasachi Khatua	15	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup>
			Phase equilibria	Dr. Sabyasachi Khatua		
			Conductance	Dr. Sabyasachi Khatua		
			Potentiometry	Dr. Sabyasachi Khatua		
		Organic Chemistry Lab	All	Dr. Sabyasachi Khatua		4 <sup>th</sup> month
	SEC1T	Basic Analytical Chemistry	Introduction, Analysis of soil, Analysis of water, Analysis of food products, Chromatography, Ion-exchange	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> month
	SEC1P	Basic Analytical Chemistry Lab	All	Dr. Sanjib Dey	8	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month

Semester-IV	DSC1DT	Inorganic Chemistry	Transition Elements (3d series)	Sudip Maity	6	1 <sup>st</sup> and 2 <sup>nd</sup> month
			Coordination Chemistry	Dr. Sanjib Dey	4	3 <sup>rd</sup> month
			Crystal Field Theory	Sudip Maity	5	3 <sup>rd</sup> and 4 <sup>th</sup> month
		Physical Chemistry-3	Kinetic Theory of Gases	Dr. Sanjib Dey	6	1 <sup>st</sup> and 2 <sup>nd</sup> 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Liquids	Dr. Sabyasachi Khatua	4	
			Solids	Dr. Sabyasachi Khatua	4	
			Chemical Kinetics	Dr. Sabyasachi Khatua	6	
	DSC1DP CHEMISTRY (LAB)	Inorganic Chemistry	Semi-micro qualitative analysis	Dr. Sabyasachi Khatua	7	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> month
		Physical Chemistry	Surface tension measurement	Dr. Sabyasachi Khatua	15	2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Viscosity measurement	Dr. Sabyasachi Khatua		
			Chemical Kinetics	Dr. Sabyasachi Khatua		

	SEC2T	Analytical Clinical Biochemistry	Basic understanding of the structures, properties and functions of carbohydrates, lipids and proteins:	Sudip Maity	8	1 <sup>st</sup> , 2 <sup>nd</sup> month
			Biochemistry of disease: A diagnostic approach by blood/urine analysis	Dr. Sabyasachi Khatua	4	3 <sup>rd</sup> month
	SEC2P	Analytical Clinical Biochemistry Lab	Identification and estimation	Dr. Sabyasachi Khatua	8	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month
Semester-5	DSE1AT Organometallics, Bioinorganic Chemistry, Polynuclear hydrocarbons and UV, IR Spectroscopy	Inorganic Chemistry-4	Organometallic Compounds	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> and 2 <sup>nd</sup> month 2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> month
			Chemistry of 3d metals	Dr. Sanjib Dey	4	
			Bio-inorganic Chemistry	Sudip Maity	10	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> month
		Organic Chemistry – 4	Polynuclear and heteronuclear aromatic compounds	Dr. Sanjib Dey	4	
			Active methylene compounds	Dr. Sanjib Dey	2	
			Application of Spectroscopy to Simple Organic Molecules	Sudip Maity	10	
	DSE1AP Organometallics, Bioinorganic Chemistry, Polynuclear hydrocarbons and UV, IR Spectroscopy	Practical: Section A: Inorganic Chemistry Section B: Organic Chemistry	All	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> and 2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month

	SEC3T	Pharmaceutical Chemistry	Drugs & Pharmaceuticals	Sudip Maity	8	1 <sup>st</sup> and 2 <sup>nd</sup> 3 <sup>rd</sup> month
			Fermentation	Sudip Maity	4	
	SEC3P	Pharmaceutical Chemistry Practical	All	Sudip Maity	04	4 <sup>th</sup> and 5 <sup>th</sup> month
Semester-6	DSE1BT	Industrial Chemicals and Environment	Industrial Gases & Inorganic Chemicals	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> and 2 <sup>nd</sup> month
			Energy & Environment & Biocatalysis	Dr. Sabyasachi Khatua	6	
			Industrial Metallurgy	Subhajit Das	4	3 <sup>rd</sup> month
			Environment and its segments	Dr. Sanjib Dey	8	2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> month
	DSE1BP	Industrial Chemicals and Environment Lab	All	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month

	SEC4T	Pesticide Chemistry	All	Sudip Maity	8	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> month
	SEC4P	Pesticide Chemistry Lab	All	Sudip Maity	4	4 <sup>th</sup> month











**Yogoda Satsanga Palpara Mahavidyalaya**

**DEPARTMENT OF CHEMISTRY (General)**

**TEACHING PLANE Chemistry (General) (Session- 2022-23)**

Semester	Paper	Unit/Module		Teacher	No. of lectures	To be completed by
Semester-1	DSC1AT	Inorganic Chemistry-1	Atomic structure	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month
			Chemical Bonding and Molecular Structure	Subhajit Das	6	2 <sup>nd</sup> month
			Fundamentals of Organic Chemistry	Sudip Maity	4	1 <sup>st</sup> Month
			Stereochemistry	Sudip Maity	12	2 <sup>nd</sup> month, 3 <sup>rd</sup> month, 4 <sup>th</sup> month
			Aliphatic Hydrocarbons			
	DSC1AP	Inorganic Chemistry	Estimation of Na <sub>2</sub> CO <sub>3</sub> and NaHCO <sub>3</sub> in a mixture	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> Month & 2 <sup>nd</sup> month
			Estimation of oxalic acid by titrating it with KMnO <sub>4</sub>	Dr. Sabyasachi Khatua		
			Estimation of water of crystallization in Mohr's salt by titrating with KMnO <sub>4</sub>	Dr. Sabyasachi Khatua		
			Estimation of Fe (II) ions by titrating it with K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> using internal indicator	Dr. Sabyasachi Khatua		
			Estimation of Cu (II) ions iodometrically using Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Dr. Sabyasachi Khatua		
		Organic Chemistry	Detection of extra elements (N, S, Cl, Br, I) in organic compounds (containing upto two extra elements)	Dr. Sabyasachi Khatua	4	3 <sup>rd</sup> month
			Separation of mixtures by Chromatography: Measure the R <sub>f</sub> value in each case (combination of two compounds to be given)	Dr. Sabyasachi Khatua	4	4 <sup>th</sup> month
Semester-2	DSC1BT	Physical Chemistry-1	Chemical Energetic	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month
			Chemical Equilibrium	Dr. Sabyasachi Khatua	4	2 <sup>nd</sup> month
			Ionic Equilibria:	Dr. Sanjib Dey	6	3 <sup>rd</sup> month

		Organic Chemistry-2	Aromatic hydrocarbons	Sudip Maity	4	1 <sup>st</sup> month
			Alkyl and Aryl Halides	Sudip Maity	6	2 <sup>nd</sup> month
			Alcohols, Phenols and Ethers (Upto 5 Carbons)	Sudip Maity	4	3 <sup>rd</sup> month

			Ethers (aliphatic and aromatic): Aldehydes and ketones (aliphatic and aromatic):	Sudip Maity	6	4 <sup>th</sup> month
	DSC1BP	Physical Chemistry	All	Dr. Sanjib Dey	16	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month
		Organic Chemistry	All			
Semester-3	DSC1CT	Physical Chemistry-2	Solutions	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Conductance	Dr. Sanjib Dey	4	
			Phase equilibria	Dr. Sanjib Dey	6	
			Electrochemistry	Dr. Sabyasachi Khatua	6	
		Organic Chemistry-3	All	Sudip Maity	12	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup> & 4 <sup>th</sup> month

	DSC1CP	Physical Chemistry Lab	Distribution	Dr. Sabyasachi Khatua	15	1 <sup>st</sup> month 2 <sup>nd</sup> month 3 <sup>rd</sup>
			Phase equilibria	Dr. Sabyasachi Khatua		
			Conductance	Dr. Sabyasachi Khatua		
			Potentiometry	Dr. Sabyasachi Khatua		
		Organic Chemistry Lab	All	Dr. Sabyasachi Khatua		4 <sup>th</sup> month
	SEC1T	Basic Analytical Chemistry	Introduction, Analysis of soil, Analysis of water, Analysis of food products, Chromatography, Ion-exchange	Subhajit Das	12	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> month
	SEC1P	Basic Analytical Chemistry Lab	All	Subhajit Das	8	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month

Semester-IV	DSC1DT	Inorganic Chemistry	Transition Elements (3d series )	Subhajit Das	6	1 <sup>st</sup> and 2 <sup>nd</sup> month
			Coordination Chemistry	Subhajit Das	4	3 <sup>rd</sup> month
			Crystal Field Theory	Subhajit Das	5	3 <sup>rd</sup> and 4 <sup>th</sup> month
		Physical Chemistry-3	Kinetic Theory of Gases	Dr. Sanjib Dey	6	1 <sup>st</sup> and 2 <sup>nd</sup> 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Liquids	Dr. Sabyasachi Khatua	4	
			Solids	Dr. Sabyasachi Khatua	4	
			Chemical Kinetics	Dr. Sabyasachi Khatua	6	
	DSC1DP CHEMISTRY (LAB)	Inorganic Chemistry	Semi-micro qualitative analysis	Dr. Sabyasachi Khatua	7	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> month
		Physical Chemistry	Surface tension measurement	Dr. Sabyasachi Khatua	15	2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month
			Viscosity measurement	Dr. Sabyasachi Khatua		
			Chemical Kinetics	Dr. Sabyasachi Khatua		

	SEC2T	Analytical Clinical Biochemistry	Basic understanding of the structures, properties and functions of carbohydrates, lipids and proteins:	Subhajit Das	8	1 <sup>st</sup> , 2 <sup>nd</sup> month
			Biochemistry of disease: A diagnostic approach by blood/urine analysis	Subhajit Das	4	3 <sup>rd</sup> month
	SEC2P	Analytical Clinical Biochemistry Lab	Identification and estimation	Subhajit Das	8	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> month
Semester-5	DSE1AT Organometallics, Bioinorganic Chemistry, Polynuclear hydrocarbons and UV, IR Spectroscopy	Inorganic Chemistry-4	Organometallic Compounds	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> and 2 <sup>nd</sup> month 2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> month
			Chemistry of 3d metals	Subhajit Das	4	
			Bio-inorganic Chemistry	Subhajit Das	10	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> month
		Organic Chemistry – 4	Polynuclear and heteronuclear aromatic compounds	Dr. Sanjib Dey	4	
			Active methylene compounds	Sudip Maity	10	
			Application of Spectroscopy to Simple Organic Molecules			
	DSE1AP Organometallics, Bioinorganic Chemistry, Polynuclear hydrocarbons and UV, IR Spectroscopy	Practical: Section A: Inorganic Chemistry Section B: Organic Chemistry	All	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> and 2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month



	SEC3T	Pharmaceutical Chemistry	Drugs & Pharmaceuticals	Sudip Maity	8	1 <sup>st</sup> and 2 <sup>nd</sup> 3 <sup>rd</sup> month
			Fermentation	Sudip Maity	4	
	SEC3P	Pharmaceutical Chemistry Practical	All	Sudip Maity	04	4 <sup>th</sup> and 5 <sup>th</sup> month
Semester-6	DSE1BT	Industrial Chemicals and Environment	Industrial Gases & Inorganic Chemicals	Dr. Sabyasachi Khatua	6	1 <sup>st</sup> and 2 <sup>nd</sup> month
			Energy & Environment & Biocatalysis	Dr. Sabyasachi Khatua	6	
			Industrial Metallurgy	Subhajit Das	4	3 <sup>rd</sup> month
			Environment and its segments	Dr. Sanjib Dey	8	2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> month
	DSE1BP	Industrial Chemicals and Environment Lab	All	Dr. Sabyasachi Khatua	12	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> month

	SEC4T	Pesticide Chemistry	All	Sudip Maity	8	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> month
	SEC4P	Pesticide Chemistry Lab	All	Sudip Maity	4	4 <sup>th</sup> month







