



# ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION

## B.Sc HONOURS CHEMISTRY: MAJOR

w.e.f AY 2023-24

### Course structure

SEMESTER	Course Code	Title	Hr/ week	Credits
I	1	Essentials and applications of Mathematical, Physical and Chemical sciences	5	4
	2	Advances in Mathematical, Physical and Chemical sciences	5	4
II	3	General & Inorganic Chemistry - (T)	3	3
		General & Inorganic Chemistry - (P)	2	1
	4	Inorganic Chemistry-I - (T)	3	3
		Inorganic Chemistry-I - (P)	2	1
III	5	Fundamentals in Organic Chemistry - (T)	3	3
		Fundamentals in Organic Chemistry - (P)	2	1
	6	Organic Chemistry (Halogen & Oxygen Organic Compounds) - (T)	3	3
		Organic Chemistry (Halogen & Oxygen Organic Compounds) - (P)	2	1
	7	Physical Chemistry-I ( Solutions and Electrochemistry) - (T)	3	3
		Physical Chemistry-I ( Solutions and Electrochemistry) - (P)	2	1
	8	Inorganic &Physical Chemistry - (T)	3	3

		Inorganic & Physical Chemistry - (P)	2	1
IV	9	Physical Chemistry-II (States of Matter, Phase Rule & surface Chemistry) - (T)	3	3
		Physical Chemistry-II (States of Matter, Phase Rule & surface Chemistry) - (P)	2	1
	10	General & Physical Chemistry - (T)	3	3
		General & Physical Chemistry - (P)	2	1
	11	Nitrogen containing Organic Compounds & Spectroscopy. - (T)	3	3
		Nitrogen containing Organic Compounds & Spectroscopy. - (P)	2	1
V	12 A	Analytical Methods in Chemistry-Quantitative analysis	3	3
		Analytical Methods in Chemistry-Quantitative analysis	2	1
		<b>OR</b>		
	12 B	Environmental Chemistry	3	3
		Environmental Chemistry	2	1
	13A	Chromatography and Instrumental methods of Analysis	3	3
		Chromatography and Instrumental methods of Analysis	2	1
		<b>OR</b>		
	13 B	Green Chemistry and Nanotechnology	3	3
		Green Chemistry and Nanotechnology	2	1
	14 A	Synthetic Organic Chemistry		
		Synthetic Organic Chemistry		
		<b>OR</b>		
	14 B	Industrial Chemistry- Fertilisers and Surface coatings		

		Industrial Chemistry- Fertilisers and Surface coatings		
	15 A	Analysis of Organic Compounds		
		Analysis of Organic Compounds		
		<b>OR</b>		
	15 B	Industrial Chemistry- Polymers and water analysis		
		Industrial Chemistry- Polymers and water analysis		
VI		Internship		
VII	16 A	Inorganic Chemistry:Advance Studies in Complexes and Group theory	3	3
		Inorganic Chemistry:Advance Studies in Complexes and Group theory	2	1
		<b>OR</b>		
	16 B	Inorganic Materials of Industrial importance	3	3
		Inorganic Materials of Industrial importance	2	1
	17 A	Spectroscopy of Organic compounds	3	3
		Spectroscopy of Organic compounds	2	1
		<b>OR</b>		
	17 B	Stereo Chemistry and Natural Products	3	3
		Stereo Chemistry and Natural Products	2	1
	18 A	Physical Chemistry: Thermo dynamics, Electro chemistry and Chemical Kinetics.	3	3
		Physical Chemistry: Thermo dynamics, Electro chemistry and Chemical Kinetics.	2	1

		<b>OR</b>		
	18 B	Instrumental Methods of Chemical Analysis	3	3
		Instrumental Methods of Chemical Analysis	2	1
SEC	19 A	Green Chemistry	3	3
		Green Chemistry	2	1
		<b>OR</b>		
	19 B	Analysis of Drugs, Foods, Dairy Products& Bio Chemical Analysis		
		Analysis of Drugs, Foods, DairyProducts& Bio Chemical Analysis		
	20 A	Polymer Chemistry		
		Polymer Chemistry		
		<b>OR</b>		
	20 B	Industrial Chemicals and Environment		
		Industrial Chemicals and Environment		
		Open Online trans disciplinary course		
VIII	21 A	Inorganic Chemistry: Metal Cluster, Electronic spectra of Complex compounds and Bio- inorganic chemistry		
		Inorganic Chemistry: Metal Cluster, Electronic spectra of Complex compounds and Bio- inorganic chemistry		
		<b>OR</b>		
	21 B	Organo metallic Chemistry		
		Organo metallic Chemistry		
	22 A	Modern Organic synthesis and Natural Products Modern		

		Modern Organic synthesis and Natural Products Modern		
		<b>OR</b>		
	22 B	Chemistry of Natural products		
		Chemistry of Natural products		
	23 A	Physical Chemistry: Quantum And Molecular Spectroscopy		
		Physical Chemistry: Quantum And Molecular Spectroscopy		
		<b>OR</b>		
	23 B	Analytical Methods of Analysis		
		Analytical Methods of Analysis		
SEC	24 A	Pharmaceutical and Medicinal Chemistry		
		Pharmaceutical and Medicinal Chemistry		
		<b>OR</b>		
	24 B	Pesticides and Green Chemistry		
		Pesticides and Green Chemistry		
	25A	Corrosion and Its Prevention		
		<b>OR</b>		
		Corrosion and Its Prevention		
	25 B	Material & Energy Balances and Utilities in Chemical Industry		
		Material & Energy Balances and Utilities in Chemical Industry		
		Open Online trans disciplinary course		