

Bachelor of Science (Chemistry Hons)

Credit: 148

FIRST SEMESTER						SECOND SEMESTER					
Code	Course Name	L	T	P	C	Code	Course Name	L	T	P	C
CHY1104	Structure, Bonding and Periodicity	3	1	0	4	CHY1204	Main group elements-I and Ionic structures	3	1	0	4
CHY1106	States of Matter	3	1	0	4	CHY1205	Stereochemistry and Reaction Mechanisms	3	1	0	4
CHY1133	Chemistry Lab-1	0	0	8	4	CHY1206	Thermodynamics and Equilibrium	3	1	0	4
CAP1170	Fundamental of Computers	1	1	0	2	CHY1233	Chemistry Lab-2	0	0	8	4
CAP1175	Fundamental of Computers Lab	0	0	2	1	XXXXXXX	GE-II (A)	2	1	0	3
CHY1003	Environmental Science	3	0	0	3	XXXXXXX	GE-II (A) Lab	0	0	2	1
LLC1110	Communicative English	2	0	0	2	XXXXXXX	GE-II (B)	2	1	0	3
XXXXXXX	GE-I	2	1	0	3	XXXXXXX	GE-II (B) Lab	0	0	2	1
XXXXXXX	GE-I Lab	-	-	2	1						
		14	4	12	24			13	5	12	24
Total Contact Hours (L + T + P)		30				Total Contact Hours (L + T + P)		30			
THIRD SEMESTER						FOURTH SEMESTER					
Code	Course Name	L	T	P	C	Code	Course Name	L	T	P	C
CHY2104	Main group elements-II and Introduction to Group theory	2	1	0	3	CHY2204	Chemistry of transition and inner-transition Metals	3	1	0	4
CHY2105	Hydrocarbons and Halogen Derivatives	2	1	0	3	CHY2205	Oxygen containing Derivatives	3	1	0	4
CHY2106	Surface, Solutions, and Mixtures	2	1	0	3	CHY2206	Kinetics and Electrochemistry	3	1	0	4
CHY2133	Chemistry Lab-3	0	0	6	3	CHY2207	Nuclear and Analytical Chemistry	3	1	0	4
XXXXXXX	GE-III (A)	2	1	0	3	CHY2233	Chemistry Lab-4	0	0	8	4
XXXXXXX	GE-III (A) Lab	0	0	2	1	CHYXXXX	DSE – I	2	1	0	3
XXXXXXX	GE-III (B)	2	1	0	3	CHYXXXX	DSE - I Lab	0	0	2	1
XXXXXXX	GE-III (B) Lab	0	0	2	1	XXXXXXX	Open Elective	2	1	0	3
XXXXXXX	SEC - I	2	0	0	2						
XXXXXXX	SEC - II	2	0	0	2						
		14	5	10	24			16	6	10	27
Total Contact Hours (L + T + P)		29				Total Contact Hours (L + T + P) + OE		32			
FIFTH SEMESTER						SIXTH SEMESTER					
Code	Course Name	L	T	P	C	Code	Course Name	L	T	P	C
CHY3107	Organometallic Chemistry	3	1	0	4	CHY3205	Organic Spectroscopy	3	1	0	4
CHY3105	Advanced Stereo Chemistry and Heterocyclic Compounds	3	1	0	4	CHY3206	Quantum Chemistry and its Applications	3	1	0	4
CHY3133	Chemistry Lab-5	0	0	8	4	CHY3233	Chemistry Lab-6	0	0	8	4
CHYXXXXX	DSE - II	2	1	0	3	CHYXXXXX	DSE – IV	2	1	0	3
CHYXXXXX	DSE - III	2	1	0	3	CHYXXXXX	DSE – V	2	1	0	3

CHY3170	Project	0	0	12	6	XXXXXXX	GE-IV	2	1	0	3
						XXXXXXX	GE-IV Lab	0	0	2	1
						XXXXXXX	Open Elective	2	1	0	3
		10	4	20	24			14	6	10	25
Total Contact Hours (L + T + P)		30				Total Contact Hours (L + T + P) + OE				30	

Discipline Specific Electives (DSE)											
Sem-IV				Sem-V				Sem-VI			
Discipline Specific Electives 1				Discipline Specific Electives 3				Discipline Specific Electives 5			
CHY2240: Green Chemistry CHY2241: Petroleum Industrial Chemistry CHY2242: Manufacturing of Composites CHY2243: Environmental Chemistry				CHY3140: Bioinorganic Chemistry CHY3141: Novel Inorganic Solids				CHY3241: Modern Electrochemistry CHY3244: Mathematics for Chemists CHY3246: Forensic Chemistry			
Discipline Specific Electives 2				Discipline Specific Electives 4				Discipline Specific Electives 6			
CHY2236: Analytical Laboratory CHY2237: Environmental Chemistry Laboratory CHY2238: Green Chemistry Laboratory CHY2239: Polymer Chemistry Laboratory				CHY3142: Material Chemistry CHY3147: Chemistry of Biomolecules CHY3143: Chemistry of Materials				CHY3242: Statistical Thermodynamics CHY3243: Industrial Chemicals and Environment CHY3247: Analytical Methods in Forensic Science			

Generic Electives (GE)											
Sem-I			Sem-II			Sem-III			Sem-VI		
Generic Electives 1			Generic Electives 2			Generic Electives 4			Generic Electives 6		
MAS1141: Differential and Integral Calculus PHY1160: Mechanics and STR PHY1136: General Physics Lab-I BIO1150: Cytology BIO1136: Cytology Laboratory			MAS1242: Elementary Differential Equations PHY1260: Oscillation and Wave Optics PHY1236: Optics Lab BIO1252: Environmental Pollution and Human Health BIO1238: Environmental Pollution and Human Health Lab			MAS2144: Real Analysis PHY2160: Electronics BIO2150: Essentials of Molecular Biology BIO2136: Molecular Biology Laboratory			MAS3244: Complex Analysis PHY3260: Modern Physics BIO3250: Physiology of Plants BIO3236: Plant Physiology Laboratory		
			Generic Electives 3			Generic Electives 5					
			MAS1243: Algebra PHY1261: Electromagnetism BIO1251: Microbiology BIO1237: Microbiology Laboratory			MAS2145: Probability Theory and Numerical Analysis PHY2161: Heat and Thermodynamics BIO2152: Genetics and Genes BIO2138: Genetics and Genes Lab CHY2260: Fundamentals of Biochemistry					

Skill Enhance Course (SEC)	
Sem-III	
Skill Enhancement Course 1 • CHY2150: Medicinal Chemistry • CHY2151: Cheminformatics • CHY2152: Fuel Chemistry • CHY2157: Industrial Chemistry Skill Enhancement Course 2 • CHY2153: Chemistry of Natural Products • CHY2154: Polymer Chemistry • CHY2155: Chemistry of Cosmetics and Perfumes • CHY2156: Pesticide Chemistry	

Open Electives	
Graded OE	Non-Graded OE
• CHY0051: Chemistry • CHY0052: Introduction to Chemistry: Reactions and Ratios • CHY0053: Introduction to Forensic Science Information • CHY0054: Nanotechnology: A Maker's Course • CHY0055: Research Methods in Science • CHY0056: Chemistry in Everyday Life • CHY0057: Writing in the Sciences • CHY0059: Water and Waste Water Treatment	

Detailed Syllabus

