		M. Sc Chemistry Curriculum 2025-27						
Semester -I								
S. No.	Course Type	Course Title	$\boldsymbol{L}$	T	P	C		
1	Discipline Core 1	Stereochemistry & Reaction mechanisms	4	0	2	6		
2	Discipline Core 2	Advanced Inorganic Chemistry and Spectroscopy	3	0	2	5		
3	Discipline Core 3	Chemical Dynamics and Interface Science	4	0	2	6		
4	Discipline Core 4	Advanced Analytical Chemistry: Principles, Techniques, and Applications	3	0	1	4		
5	University Core 1	Professional Communication	0	0	2	2		
		Total	<i>15</i>	0	8	23		
		Semester -II						
S. No.	Course Type	Course Title	$\boldsymbol{L}$	T	P	C		
1	Discipline Core 5	Organic Spectroscopy	4	0	0	4		
2	Discipline Core 6	Reaction mechanism and Group theory	3	0	0	3		
3	Discipline Core 7	Quantum Chemistry and Molecular Spectroscopy	4	0	2	6		
4	Discipline Core 8	Advanced Analytical Separation and Instrumental Techniques	3	0	2	5		
5	Discipline Core 9	Computer Applications for chemistry	1	0	1	2		
6	Elective 1	Elective 1	3	0	0	3		
		Total	18	0	5	23		
	Se	emester –III (Inorganic Chemistry Specialization)						
S. No.	Course Type	Course Title	$\boldsymbol{L}$	T	P	C		
1	DSE 1	Organometallic Chemistry and Applications	4	0	1	5		
2	DSE 2	Spectroscopic techniques in Inorganic Chemistry	4	0	1	5		
3	DSE 3	Bio-Inorganic Chemistry	4	0	1	5		
4	Elective 2	Elective 2	3	0	0	<u>3</u>		
5	University Core 2	Research Methodology	2	0	0	2		
6	University Core 3	Research, Innovation & IPR	2	0	0	2		
		Total	19	0	3	22		
Semester –III (Organic Chemistry Specialization)								
S. No.	Course Type	Course Title	$\boldsymbol{L}$	T	P	C		
1	DSE 1	Photo chemistry & Pericyclic reaction	4	0	1	5		

			1			
2	DSE 2	Reagents and Heterocyclic Chemistry	4	0	1	5
3	DSE 3	Chemistry of Natural Products and Retrosynthesis	4	0	1	5
4	Elective 2	Elective 2	3	0	0	<u>3</u>
5	University Core 2	Research Methodology	2	0	0	2
6	University Core 3	Research, Innovation & IPR	2	0	0	2
		Total	19	0	5	22
	S	emester –III (Physical Chemistry Specialization)				
S. No.	Course Type	Course Title	$\boldsymbol{L}$	T	P	C
1	DSE 1	Applied Electrochemistry	4	0	2	5
2	DSE 2	Chemical Kinetics and Surface Chemistry	4	0	2	5
3	DSE 3	Molecular Spectroscopy	4	0	2	5
4	Elective 2	Elective 2	3	0	0	<u>3</u>
5	University Core 2	Research Methodology	2	0	0	2
6	University Core 3	Research, Innovation & IPR	2	0	0	2
		Total	19	0	5	22
			•			
	Se	mester –III (Analytical Chemistry Specialization)				
S. No.	Course Type	Course Title	$\boldsymbol{L}$	T	P	C
1	DSE 1	Electroanalytical methods	4	0	2	5
2	DSE 2	Quality control and quality assurance	4	0	2	5
3	DSE 3	Advanced Instrumentation methods	4	0	2	5
4	Elective 2	Elective 2	3	0	0	<u>3</u>
5	University Core 2	Research Methodology	2	0	0	2
6	University Core 3	Research, Innovation & IPR	2	0	0	2
		Total	19	0	5	22
		Semester -IV				
S. No.	Course Type	Course Title	$\boldsymbol{L}$	T	P	C
1	Project	Project	0	0	0	12
		Total	0	0	0	12
		List of Elective I				
S. No		Name of the Electives	$\boldsymbol{L}$	T	P	C
1	Elective 1	Polymer chemistry	3	0	0	3
<u>I</u>	1	<u> </u>	1			

2	Elective 1	Industrial chemistry	3	0	0	3			
3	Elective 1	Solid State chemistry	3	0	0	3			
4	Elective 1	Environmental analytical chemistry	3	0	0	3			
	1	List of Elective II	T						
				ı		I			
S. No		Name of the Electives	L	T	P	<i>C</i>			
1	Elective 2	Bio-organic Chemistry	3	0	0	3			
2	Elective 2	Advanced Green Chemistry	3	0	0	3			
3	Elective 2	Carbon Materials	3	0	0	3			
4	Elective 2	Advance Metallurgical Sciences	3	0	0	3			
5	Elective 2	Industrial Biochemistry	3	0	0	3			
M. Sc One year (Organic chemistry)- Sem I									
S. No.	Course Type	Course Title	L	T	P	C			
1	DSE 1	Photo chemistry & Pericyclic reaction	4	0	1	5			
2	DSE 2	Reagents and Heterocyclic Chemistry	4	0	1	5			
3	DSE 3	Chemistry of Natural Products and Retrosynthesis	4	0	1	5			
4	Elective 1	Elective-1	3	0	0	3			
5	Elective-1	Elective 2	3	0	0	3			
6	University Core	Professional Communication	1	0	1	2			
		TOTAL	19	0	4	23			
v		M. Sc. One year (Inorganic chemistry) Sem I							
S. No.	Course Type	Course Title	L	T	P	С			
1	DSE 1	Organometallic Chemistry	4	0	1	5			
2	DSE 2	Spectroscopic techniques in Inorganic Chemistry	4	0	1	5			
3	DSE 3	Bio-Inorganic Chemistry	4	0	1	5			
4	Elective 1	Elective-1	3	0	0	3			
5	Elective-1	Elective 2	3	0	0	3			
6	University Core 1	Professional Communication	1	0	1	2			
		TOTAL	19	0	4	23			
M. Sc One year (Physical Chemistry) - Sem I									
S.No.	Course Type	Course Title	L	Т	P	С			

1	DSE 1	Applied Electrochemistry	4	0	1	5
2	DSE 2	Chemical Kinetics and Surface Chemistry	4	0	1	5
3	DSE 3	Molecular Spectroscopy	4	0	1	5
4	Elective 1	Elective-1	3	0	0	3
5	Elective-1	Elective 2	3	0	0	3
6	University Core	Professional Communication	1	0	1	2
6	1	TOTAL	10	0	1	23
		TOTAL	17	U	+	23
		M. Sc One year (Analytical chemistry)- Sem I				
S. No.	Course Type	Course Title	L	Т	P	С
1	DSE 1	Electroanalytical methods	4	0		5
2	DSE 2	Quality control and quality assurance	4	0		5
3	DSE 3	Advanced Instrumentation methods	4	0		5
4	Elective 1	Elective-1	3	0		3
5	Elective-1	Elective 2	3	0		3
	University Core	Professional Communication	1	0	_	2
6	1					
6	1	TOTAL	19	0	4	23
6	I	TOTAL	19	0	4	23
6	I	TOTAL  Semester -II	19	0	4	23
6 S. No.	Course Code		19 <i>L</i>		4 P	
	Course Code Project	Semester -II		T	P	C
S. No. 1	Course Code Project University Core	Semester -II  Course Title  Project	L 0	T 0	P 0	C 14
S. No. 1 2	Course Code Project University Core 2 University Core	Semester -II  Course Title  Project  Research Methodology	L 0	T 0	P 0 0	C 14
S. No. 1	Course Code Project University Core 2	Semester -II  Course Title  Project  Research Methodology  Research, Innovation & IPR	L 0 2	T 0 0	P 0 0	C 14
S. No. 1 2	Course Code Project University Core 2 University Core	Semester -II  Course Title  Project  Research Methodology	L 0 2	T 0	P 0 0	C 14 2
S. No. 1 2	Course Code Project University Core 2 University Core	Semester -II  Course Title  Project  Research Methodology  Research, Innovation & IPR	L 0 2	T 0 0	P 0 0	C 14 2
S. No. 1 2	Course Code Project University Core 2 University Core	Semester -II  Course Title  Project  Research Methodology  Research, Innovation & IPR	L 0 2	T 0 0	P 0 0	C 14 2
S. No. 1 2	Course Code Project University Core 2 University Core	Semester -II  Course Title  Project  Research Methodology  Research, Innovation & IPR  Total	L 0 2	T 0 0	P 0 0	C 14 2
S. No. 1 2	Course Code Project University Core 2 University Core	Semester -II  Course Title  Project  Research Methodology  Research, Innovation & IPR  Total	L 0 2	T 0 0 0 0 0	P 0 0	C 14 2
S. No. 1 2 3	Course Code Project University Core 2 University Core	Semester -II  Course Title  Project  Research Methodology  Research, Innovation & IPR  Total  List of Elective I	L 0 2 1 3 3	T 0 0 0 0 0	P 0 0 0	C 14 2 1 17
S. No. 1 2 3 S. No	Course Code Project University Core 2 University Core 3	Semester -II  Course Title  Project  Research Methodology  Research, Innovation & IPR  Total  List of Elective I  Name of the Electives	L   0   2   1   3   3   L   L   L   L   L   L   L   L	T 0 0 0 0 T	P 0 0 0 P 0	C 14 2 1 17 C C
S. No.  1  2  3  S. No  1	Course Code Project University Core 2 University Core 3	Semester -II  Course Title  Project  Research Methodology  Research, Innovation & IPR  Total  List of Elective I  Name of the Electives  Polymer chemistry	L   0   2   1   3   3   L   3   3	T 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P 0 0 0 0	C 14 2 1 17 C 3

	List of Elective II							
S. No		Name of the Electives	$\boldsymbol{L}$	T	P	C		
1	Elective 2	Bio-organic Chemistry	3	0	0	3		
2	Elective 2	Advanced Green Chemistry	3	0	0	3		
3	Elective 2	Carbon Materials	3	0	0	3		
4	Elective 2	Advance Metallurgical Sciences	3	0	0	3		
1	Elective 2	Industrial Biochemistry	3	0	0	3		