

M.Sc. Chemistry									
Curriculum 2023-24 (1year)									
Semester 1									
Semester I									
Sl No	Course Code	Name of the Course					Assessment Pattern		
			L	T	P	C	IA	CAT	ETE
1	MSCH 5008	Organic Spectroscopy	4	0	0	4	20	30	50
2	MBS24T1103	Reaction mechanism and Basics of group theory	3	0	0	3	20	30	50
3	MSCH 5024	Physical Chemistry-II	3	0	4	5	20	30	50
4	MBS24T1104	Techniques in Analytical Chemistry	3	0	4	5	20	30	50
5	MBS28T2111	Research Methodology	2	0	0	2	30	20	50
6	MLEUCT1003	Creativity, Innovation and Entrepreneurship & IPR	1	0	0	1	50		50
		Total	16	0	8	20			
Semester II									
Semester II (Organic Specialization)									
Sl No	Course Code	Name of the Course					Assessment Pattern		
			L	T	P	C	IA	CAT	ETE
1	MSCH6001	Photo chemistry & Pericyclic reaction	4	0	2	5	20	30	50
2	MSCH6002	Reagents and Heterocyclic Chemistry	4	0	2	5	20	30	50
3	MSCH6003	Chemistry of Natural Products and Retrosynthesis	4	0	2	5	20	30	50

4	MBS24TXXX	(Elective)	3	0	0	3	20	30	50
5	MLLUCT1003	Campus to Corporate	1	0	2	2			
		Total	16	0	8	20			

Semester II (Inorganic Specialization)

Sl No	Course Code	Name of the Course					Assessment Pattern		
			L	T	P	C	IA	CAT	ETE
1	MSCH 6006	Organometallic Chemistry	4	0	2	5	20	30	50
2	MSCH 6012	Spectroscopic techniques in Inorganic Chemistry	4	0	2	5	20	30	50
3	MSCH 6009	Bio-Inorganic Chemistry	4	0	2	5	20	30	50
4	MBS24TXXX	(elective)	3	0	0	3	20	30	50
7	MLLUCT1003	Campus to Corporate	1	0	2	2			
		Total	16	0	8	20			

Semester II (Physical Specialization)

Sl No	Course Code	Name of the Course					Assessment Pattern		
			L	T	P	C	IA	CAT	ETE
1	MSCH6021	Applied Electrochemistry	4	0	2	5	20	30	50
2	MSCH6022	Chemical Kinetics and Surface Chemistry	4	0	2	5	20	30	50
3	MSCH6023	Molecular Spectroscopy	4	0	2	5	20	30	50

4	MBS24TXXX	(Elective)	3	0	0	3	20	30	50
	MLLUCT1003	Campus to Corporate	1	0	2	2			
		Total	16	0	8	20			
Semester II (Analytical Specialization)									
Sl No	Course Code	Name of the Course	L	T	P	C	IA	CAT	ETE
1	MSCH6031	Electroanalytical methods	4	0	2	5	20	30	50
2	MSCH6032	Quality control and quality assurance	4	0	2	5	20	30	50
3	MSCH6033	Advanced Instrumentation methods	4	0	2	5	20	30	50
4	MBS24TXXX	(Elective)	3	0	0	3	20	30	50
6	MLLUCT1003	Campus to Corporate	1	0	2	2			
		Total	16	0	8	20			
	MSCH 6006	Organometallic Chemistry	4	0	0	4	3		
List of Electives	MSCH 6012	Spectroscopic techniques in Inorganic Chemistry	4	0	0	4	1		Theory
	MSCH 6009	Bio-Inorganic Chemistry	4	0	0	4	4		Theory
Sl No	Course Code	Name of the Electives					Assessment Pattern		
			L	T	P	C	IA	CAT	ETE
1	MBS24T5101	Polymer chemistry	3	0	0	3	20	30	50
2	MBS24T5102	Industrial chemistry	3	0	0	3	20	30	50

3	MBS24T5103	Solid State chemistry	3	0	0	3	20	30	50
4	MBS24T5104	Environmental analytical chemistry	3	0	0	3	20	30	50
5	MBS24T5105	Bio-organic Chemistry	3	0	0	3	20	30	50
6	MBS24T5106	Advanced Green Chemistry	3	0	0	3	20	30	50
7	MBS24T5107	Carbon Materials	3	0	0	3	20	30	50
8	MBS24T5108	Advance Metallurgical Sciences	3	0	0	3	20	30	50
9	MBS24T5109	Industrial Biochemistry	3	0	0	3	20	30	50
							4	Project	
3	MSCH6023	Molecular Spectroscopy	4	0	0	4			
							3		
4	MBS24TXXX	(Elective)	3	0	0	3			
							0		
5	MSCH6025	Physical chemistry Lab –II	0	0	8	4			
6	MBS24P3001	Project Phase II	0	0	0	3			
	MLLUCT1003	Campus to Corporate	3	0	0	3		Course Type (Theory/ Integrated/ Comprehensive/ Workshop)	
		Start up, Innovation, Incubation and Entrepreneurship	0			0	Credit		
							3	Theory	
		Total	18	0	8	25			
	Analytical Specialization						4	Theory	
SI No	Course Code	Name of the Course	L	T	P	C		Theory	
1	MSCH6031	Electroanalytical methods	4	0	0	4		Integrated	
2	MSCH6032	Quality control and quality assurance	4	0	0	4		Integrated	

3	MSCH6033	Advanced Instrumentation methods	4	0	0	4	Credit		
4	MBS24TXXX	(Elective)	3	0	0	3	4	Course Type (Theory/ Integrated/ Comprehensive/ Workshop)	
7	MSCH6034	Analytical chemistry Lab -II	0	0	8	4	3		
6	MBS24P3001	Project Phase II	0	0	0	3	4	Theory	
	MLLUCT1003	Campus to Corporate	3	0	0	3	3	Theory	
		Start up, Innovation, Incubation and Entrepreneurship	0			0	3	Theory	
		Total	18	0	8	25	1	Integrated	
List of Electives	VSBA5001	Academic Report writing and Funding Opportunities	Value-added	2	0	0	0	Integrated	
								Project	
Sl No	Course Code	Name of the Electives					4		
			L	T	P	C			
1	MBS24T5101	Polymer chemistry	3	0	0	3	1		
2	MBS24T5102	Industrial chemistry	3	0	0	3	3		
3	MBS24T5103	Solid State chemistry	3	0	0	3	4		
4	MBS24T5104	Environmental analytical chemistry	3	0	0	3	3		
5	MBS24T5105	Bio-organic Chemistry	3	0	0	3	1		
6	MBS24T5106	Advanced Green Chemistry	3	0	0	3	4		
7	MBS24T5107	Carbon Materials	3	0	0	3	3		
8	MBS24T5108	Advance Metallurgical Sciences	3	0	0	3	0		

9	MBS24T5109	Industrial Biochemistry	3	0	0	3			
	Course Code	Course Name	Course Type	Teaching Scheme					
				L	T	P	Credit		
Sem VII	B030701T	Linear Algebra	Major	3	1	0	4		
Sem VII	B030702T	Real Analysis	Major	3	1	0	4		
Sem VII	B030703T	Ordinary Differential Equations	Major	3	1	0	4		
Sem VII	B030704T	Mathematical Statistics	Major	3	1	0	4		
Sem VII	B030705P	Mathematical Statistics Lab using R	Major	0	2	1	1		
Sem VII		Ability Enhancement Course	University core				3		
Sem VII	B010721T	Research Methodology	University core	2	0	0	2		
Total credit=22									
Sem VIII	B030801T	Abstract Algebra	Major	3	1	0	4		
Sem VIII	B030802T	Partial Differential Equations	Major	3	1	0	4		
Sem VIII	B030803T	Topology	Major	3	1	0	4		
Sem VIII	B030801R	Research Project	PBL	0	0	12	6		

Total credit=18								
Total credits for BSc (Hons) Degree in Mathematics =160								
List of Ability Enhancement Courses								
Sl No	Course Code	Name of the Ability Enhancement Courses						
			L	T	P	C		
1		Professional Communication-II	1	0	4	3		
2		Campus to Corporate	3	0	0	3		
Vocational Courses List- SBAS								
Semester	Bucket -I (Physics)	Bucket -II (Chemistry)	Bucket -III (Math)	Bucket -IV (Forensic)	Bucket -V (Bio)			
Sem IV	Vocational Minor-I	Vocational Minor-I	Probability and Statistics+ Lab	Vocational Minor-I	Vocational Minor-I			
Sem V	Vocational Minor-II	Vocational Minor-II	Statistical Methods and Design of Experiment	Vocational Minor-II	Vocational Minor-II			
Sem VI	Vocational Minor-III	Vocational Minor-III	Financial Mathematics	Vocational Minor-III	Vocational Minor-III			