

VISVESVARAYATECHNOLOGICALUNIVERSITY,BELAGAVI.



Scheme of Teaching and Examinations and Syllabus
M.Sc.in Chemistry
(**Specialization:** Analytical Chemistry/Organic Chemistry)(MSC)
(Effective from the Academic year 2026-27)

M.Sc. in Chemistry

(Specialization: Analytical Chemistry/ Organic Chemistry)

Choice Based Credit System(CBCS)and Outcome-Based Education(OBE)

I SEMESTER

Sl.No	Course	Course Code	Course Title	Teaching & Learning Scheme					Examination				Credits
				CI		LI	TW & SL	Total Hours/Sem	Duration in hours	CIE Marks	SEE Marks	Total Marks	
				L	T	P							
1	HCC	1MSC101	Fundamental Concepts of Analytical Chemistry	42	00	00	48	90	03	50	50	100	3
2	HCC	1MSC102	Concepts of Inorganic Chemistry	42	00	00	48	90	03	50	50	100	3
3	HCC	1MSC103	Stereo chemistry and Organic Reaction Mechanisms	42	00	00	48	90	03	50	50	100	3
4	HCC	1MSC104	Thermodynamics, Kinetics, Photo and Quantum chemistry	42	00	00	48	90	03	50	50	100	3
5	SCP	1MSCL105	Inorganic Chemistry Practical	40	00	28	52	120	03	50	50	100	4
6	SCP	1MSCL106	Physical Chemistry Practical	40	00	28	52	120	03	50	50	100	4
7	AUD/AEC	1MSC107	Online Course	Classes and evaluation procedures are as per the policy of the online course providers.									PP
TOTAL				248	00	56	296	600	18	300	300	600	20

Note: HCC-Hard Core Courses, SCC: Soft Core Courses. SCP-Soft Core Practical, MCC- Mandatory Credit Course, AUD/AEC–Audit Course/Ability Enhancement Course (A pass in AUD/AEC is mandatory for the award of the degree),

L-Lecture ,P-Practical, T/SDA-Tutorial/Skill Development Activities(Hours are for Interaction between faculty and students)

II SEMESTER													
Sl.No	Course	Course Code	Course Title	Teaching & Learning Scheme					Examination				Credits
				CI		LI	TW & SL	Total Hours/Sem	Duration in hours	CIE Marks	SEE Marks	Total Marks	
				L	T								
1	HCC	1MSC201	Titrimetric and Applied Analysis	42	00	00	48	90	03	50	50	100	3
2	HCC	1MSC202	Coordination and Organ metallic Chemistry	42	00	00	48	90	03	50	50	100	3
3	HCC	1MSC203	Synthetic Organic and Bioorganic Chemistry	42	00	00	48	90	03	50	50	100	3
4	HCC	1MSC204	Principles of Physical and Surface Chemistry	42	00	00	48	90	03	50	50	100	3
5	SCP	1MSCL205	Analytical Chemistry Practical	40	00	28	52	120	03	50	50	100	4
6	SCP	1MSCL206	Organic Chemistry Practical	40	00	28	52	120	03	50	50	100	4
7	AUD/AEC	1MSC207	Research Methodology and IPR	Classes and evaluation procedures are as per the policy of the online course providers.									PP
TOTAL				248	00	56	296	600	18	300	300	600	20
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III SEMESTER															
Sl. No	Course	Course Code	Course Title	Teaching & Learning Scheme					Examination				Credits		
				CI	L	T	P	LI	TW & SL	Total Hours/ Sem	Duration in hours	CIE Marks		SEE Marks	Total Marks
1	HCC	1MSC301	Molecular Symmetry and Spectroscopy	42	00	00	48	90	03	50	50	100	3		
2	HCC	1MSC302	NMR and Massspectros copy	42	00	00	48	90	03	50	50	100	3		
3	HCC	1MSC303	Solid State and Electrochemistry	42	00	00	48	90	03	50	50	100	3		
4	MCC	1MSC304	Nano science and Applications	42	00	00	48	90	03	50	50	100	3		
5	SCC	1MSCL305X	Specialization Practical-I	40	00	28	52	120	03	50	50	100	4		
6	SCP	1MSCL306X	Specialization Practical- II	40	00	28	52	120	03	50	50	100	4		
8	Industry Visit	MSC307	Industrial/Study/Technical Tour and Report	Students have to undergo mandatory Industrial/Study/Technical Tour and report to be submitted to the Department during III or IV semester								PP			
TOTAL				248	00	56	296	600	18	300	300	600	20		

Student has to opt for one specialization (Analytical/Organic) during III Semester and continue the same in IV semester

Analytical Chemistry Specialization			Organic Chemistry Specialization		
1MSC305A	Analytical Chemistry Practical-I		1MSC305B	Organic Chemistry Practical-I	
1MSC306A	Analytical Chemistry Practical- II		1MSC306B	Organic Chemistry Practical- II	

IV SEMESTER													
Sl. No	Course	Course Code	Course Title	Teaching & Learning Scheme					Examination				Credits
				CI	T	LI	TW & SL	Total Hours/Semester	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	SCC	1MSC401X	Specialization Core Paper-I	42	00	00	48	90	03	50	50	100	3
2	SCC	1MSC402X	Specialization Core Paper-II	42	00	00	48	90	03	50	50	100	3
3	SCC	1MSC403X	Specialization Core Paper-III	42	00	00	48	90	03	50	50	100	3
4	SCP	1MSCL404X	Specialization Practical- III	40	00	28	52	120	03	50	50	100	4
5	Project	1MSC405	Project	00	00	00	210	210	03	100	100	200	7
TOTAL				166	00	28	406	600	12	300	300	600	20

Student has to choose all courses in one specialization chosen in III Semester

Analytical Chemistry Specialization		Organic Chemistry Specialization	
1MSC401A	Advanced Analytical Chemistry	1MSC401B	Advanced Organic Chemistry
1MSC402A	Environmental and Pharmaceutical Analytical Chemistry	1MSC402B	Advanced Medicinal and Bioorganic Chemistry
1MSC403A	Industrial Analytical Chemistry	1MSC403B	Chemistry of Natural Products
1MSCL404A	Analytical Chemistry Practical- III	1MSCL404B	Organic Chemistry Practical- III

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