

## MASTER OF SCIENCE (CHEMISTRY)

Duration: 24 Months (2Years) Eligibility: Graduation with Science Subjects

### COURSE STRUCTURE M.SC CHEMISTRY SEMESTER Ist

Course Details				External Assessment		Internal Assessment				Credit Distribution			Allotted Credits
Course Code	Course Type	Course Title	Total Marks	Major		Minor		Sessional ***		L	T	P	Subject wise Distribution
				Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks				
<b>Theory Group</b>													
6SMCH101	<b>Core Course</b>	Inorganic Chemistry - I	100	50	17	20	08	30	12	4	-	-	4
6SMCH102	<b>Core Course</b>	Organic Chemistry - I	100	50	17	20	08	30	12	4	-	-	4
6SMCH103	<b>Core Course</b>	Physical Chemistry - I	100	50	17	20	08	30	12	4	-	-	4
6SMCH104	<b>Core Course</b>	Analytical Chemistry - I	100	50	17	20	08	30	12	4	-	-	4
<b>Practical Group</b>				<b>Term End Practical Exam</b>		<b>Lab Performance</b>		<b>Sessional</b>					
6SMCH105	<b>Practical</b>	LAB - I	50	25	08	-	-	25	08	-	-	2	2
6SMCH106	<b>Practical</b>	LAB - II	50	25	08	-	-	25	08	-	-	2	2
<b>Grand Total</b>			<b>500</b>							<b>16</b>	<b>-</b>	<b>4</b>	<b>20</b>

Minimum Passing Marks are equivalent to Grade D

L- Lectures T- Tutorials P- Practical

Major- Term End Theory / Practical Exam

Minor- Pre University Test

Sessional weightage – Attendance 50%, Three Class Tests/Lab Performance Assignment 50%

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## COURSE STRUCTURE M.SC CHEMISTRY SEMESTER IInd

Course Details				External Assessment		Internal Assessment				Credit Distribution			Allotted Credits
Course Code	Course Type	Course Title	Total Marks	Major		Minor		Sessional ***	Min Marks	L	T	P	Subject wise Distribution
				Max Marks	Min Marks	Max Marks	Min Marks	Max Marks					
<b>Theory Group</b>													
6SMCH201	<b>Core Course</b>	Inorganic Chemistry – II	100	50	17	20	08	30	12	4	-	-	4
6SMCH202	<b>Core Course</b>	Organic Chemistry – II	100	50	17	20	08	30	12	4	-	-	4
6SMCH203	<b>Core Course</b>	Physical Chemistry – II	100	50	17	20	08	30	12	4	-	-	4
6SMCH204	<b>Core Course</b>	Analytical Chemistry - II	100	50	17	20	08	30	12	4	-	-	4
<b>Practical Group</b>				<b>Term End Practical Exam</b>		<b>Lab Performance</b>		<b>Sessional</b>					
6SMCH205	<b>Practical</b>	Lab –I	50	25	08	-	-	25	08	-	-	2	2
6SMCH206	<b>Practical</b>	Lab-II	50	25	08	-	-	25	08	-	-	2	2
<b>Skill Courses</b>								<b>Sessional</b>					
	<b>Skill Enhancement</b>	Skill Enhancement Elective Course-1	50	-	-	-	-	50	20	1	-	1	2
	<b>Grand Total</b>		<b>550</b>							<b>17</b>		<b>5</b>	<b>22</b>

**Minimum Passing Marks are equivalent to Grade D**

**L- Lectures T- Tutorials P- Practical**

**Major- Term End Theory / Practical Exam**

**Minor- Pre University Test**

**Sessional weightage – Attendance 50%, Three Class Tests/ Lab Performance Assignment 50%**

**Skill Elective I – Any other course being offered in this semester as per the list given at the end of course structure.**

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### COURSE STRUCTURE M.SC CHEMISTRY SEMESTER IIIrd

Course Details				External Assessment		Internal Assessment				Credit Distribution			Allotted Credits
Course Code	Course Type	Course Title	Total Marks	Major		Minor		Sessional ***		L	T	P	Subject wise Distribution
				Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks				
<b>Theory Group</b>													
6SMCH301	<b>Core Course</b>	Application of Spectroscopy	100	50	17	20	08	30	12	4	-	-	4
6SMCH302	<b>Core Course</b>	Bio Organic & Inorganic chemistry	100	50	17	20	08	30	12	4	-	-	4
****	<b>Discipline Specific Elective</b>	Elective -I (Select any one from specialization opted)	100	50	17	20	08	30	12	4	-	-	4
****	<b>Discipline Specific Elective</b>	Elective -II (Select any one from specialization opted)	100	50	17	20	08	30	12	4	-	-	4
<b>Practical Group</b>				<b>Term End Practical Exam</b>		<b>Lab Performance</b>		<b>Sessional</b>					
****	<b>Practical</b>	Lab -I	50	25	08	-	-	25	08	-	-	2	2
****	<b>Practical</b>	Lab-II	50	25	08	-	-	25	08	-	-	2	2
<b>Skill Courses</b>								<b>Sessional</b>					
	<b>Skill Enhancement</b>	Skill Enhancement Elective Course-1	50	-	-	-	-	50	20	1	-	1	2
<b>Grand Total</b>			<b>550</b>							<b>17</b>	<b>-</b>	<b>5</b>	<b>22</b>

Minimum Passing Marks are equivalent to Grade D

L- Lectures T- Tutorials P- Practical

Major- Term End Theory / Practical Exam

Minor- Pre University Test

Sessional weightage – Attendance 50%, Three Class Tests/ Lab Performance Assignment 50%

Skill Elective I – Any other course being offered in this semester as per the list given at the end of course structure.

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COURSE STRUCTURE M.SC CHEMISTRY SEMESTER IV <sup>th</sup>													
Course Details				External Assessment		Internal Assessment				Credit Distribution			Allotted Credits
Course Code	Course Type	Course Title	Total Marks	Major		Minor		Sessional ***		L	T	P	Subject wise Distribution
				Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks				
<b>Theory Group</b>													
****	<b>Discipline Specific Elective</b>	Elective -III (Select any one from specialization opted)	100	50	17	20	08	30	12	4	-	-	4
****	<b>Discipline Specific Elective</b>	Elective -IV (Select any one from specialization opted)	100	50	17	20	08	30	12	4	-	-	4
<b>Practical Group</b>				<b>Term End Practical Exam</b>		<b>Lab Performance</b>		<b>Sessional</b>					
****	<b>Practical</b>	LAB -I	50	25	08	-	-	25	08	-	-	2	2
****	<b>Practical</b>	LAB-II	50	25	08	-	-	25	08	-	-	2	2
	<b>Research Component</b>	Project/Internship & Viva Voce	200	100	33	-	-	100	40	-	-	8	8
	<b>Grand Total</b>		<b>500</b>							<b>8</b>	<b>-</b>	<b>12</b>	<b>20</b>

Minimum Passing Marks are equivalent to Grade D

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Major- Term End Theory / Practical Exam

Minor- Pre University Test

Sessional weightage – Attendance 50%, Three Class Tests/ Lab Performance Assignment 50%

Compulsory Project/Dessertation with choice in any Disciplinary specific elective. Compulsory one paper presentation certificate in related dicipline.

## SPECILIZATION WITH ELECTIVE

**\*Note** - Students need to select any one group and choose any two subjects from selected group for Third and Fourth semester.

Electives for Third Semester			Electives for Fourth Semester		
Course Code	Course Type	List of Electives	Course Code	Course Type	List of Electives
<b>GROUP ELECTIV-I &amp; II Name – M.Sc (Chemistry)</b>			<b>GROUP ELECTIVE-III &amp; IV Name –M.Sc (Chemistry)</b>		
6SMCH303	Discipline Specific Organic Chemistry	Applied Organic Chemistry	6SMCH401	Discipline Specific Organic Chemistry	Chemistry of Natural Products
6SMCH304	Discipline Specific Organic Chemistry	Drug and Heterocyclic Compounds	6SMCH402	Discipline Specific Organic Chemistry	Stereochemistry
6SMCH305	Discipline Specific Inorganic Chemistry	Chemistry of Inorganic Materials	6SMCH403	Discipline Specific Inorganic Chemistry	Separation Science
6SMCH306	Discipline Specific Inorganic Chemistry	Co-ordination Chemistry	6SMCH404	Discipline Specific Inorganic Chemistry	Organ Metallic Chemistry
6SMCH307	Discipline Specific Physical Chemistry	Advanced Chemical Kinetics	6SMCH405	Discipline Specific Physical Chemistry	Surface Chemistry
6SMCH308	Discipline Specific Physical Chemistry	Electro- Chemistry	6SMCH406	Discipline Specific Physical Chemistry	Chemistry of Materials

## SKILL ENHANCEMENT ELECTIVE COURSES

<b>Non-Technical</b>			
Elective No.	Department/ Faculty Name		
	<b>Faculty of Information Technology</b>		
I	SCIT 201	Data Entry Operation	2(1+0+1)
II	SCIT 301	Multimedia	2(1+0+1)
III	SCIT 501	Web Designing with HTML	2(1+0+1)
IV	SCMIT 201	Web Development	2(1+0+1)
V	SCMIT 301	LINUX	2(1+0+1)
	<b>Faculty of Management</b>		
I	SMGT 201	Briefing and Presentation Skills	2(1+0+1)
II	SMGT 301	Resolving Conflicts and Negotiation Skills	2(1+0+1)
III	SMGT 802	Entrepreneurship Development	2(1+0+1)
	<b>Faculty of Commerce</b>		
I	SCOM 201	Tally ERP 9	2(1+0+1)
II	SCOM 302	Multimedia	2(1+0+1)
III	SCOM 803	Data Analyst	2(1+0+1)
	<b>Faculty of Humanities</b>		
I	SHBA 301	Pursuing Happiness	2(1+0+1)
II	SHBA302	Communication Skill and Personality Development	2(1+0+1)
III	SHMA301	Tourism in M.P	2(1+0+1)
	<b>Faculty of Science</b>		
I	SSBI 301	Mushroom Cultivation	2(1+0+1)
II	SSPH 301	House Hold Wiring	2(1+0+1)
III	SSPH 301	Basic Instrumentation	2(1+0+1)
IV	SSPH 301	DTP Operator	2(1+0+1)
V	SSCH 301	Graphic Designing	2(1+0+1)
	<b>Faculty of Education</b>		
I	SCBE 403	Understanding of ICTC (Information Communication Technology)	2(1+0+1)
II	SCPE 201	Yoga Education	2(1+0+1)