



**SARDAR PATEL UNIVERSITY**  
**Vallabh Vidyanagar, Gujarat**  
**(Reaccredited with 'A' Grade by NAAC (CGPA 3.25))**  
**Syllabus with effect from the Academic Year 2021-2022**

**PROGRAMME STRUCTURE**  
**Master of Science in Chemistry**  
**MSc (Chemistry) Semester: I**

Programme Outcome (PO) - For MSc Chemistry Programme	<p>Master of Science program provides extended theoretical and practical knowledge of different science subjects. Master of Science programme at Sardar Patel University is designed keeping the overall back ground preparation in mind for the student to either seek a job or to become an entrepreneur. The students, after completion of Bachelor of Science can select the master's programme in the subject they have had at the final year or in a related discipline (depending upon eligibility criteria prescribed by university).</p> <p><b>Programme outcomes: At the end of the program, the students will be able to</b></p> <ol style="list-style-type: none"><li>1. Have a deep understanding of both the theoretical and practical concepts in the respective subject.</li><li>2. Understand laboratory processes and use scientific equipments and work independently.</li><li>3. Develop research temperament as a consequence of their theory and practical learning.</li><li>4. Communicate scientific information in oral and written form.</li><li>5. Understand the issues related to nature and environmental contexts and think rationally for sustainable development.</li><li>6. The students are able to handle unexpected situations by critically analyzing the problem.</li></ol>
Programme Specific Outcome (PSO) - For MSc Chemistry Semester - I	<p>Students will have a firm foundation in the fundamentals and application of current chemical and scientific theories including those in Analytical Inorganic Chemistry, Organic Chemistry, Physical Chemistry, Chemistry and Industrial polymer Chemistry.</p> <p>After completing M.Sc. chemistry program, students will be able to:</p> <ul style="list-style-type: none"><li>■ Demonstrate and apply the fundamental knowledge of the basic principles in various fields of Chemistry.</li><li>■ Apply knowledge to build up small scale industry for developing endogenous product.</li><li>■ Collaborate effectively on team-oriented projects in the field of chemistry or other related fields.</li><li>■ Communicate scientific information in a clear and concise manner both orally and in writing.</li><li>■ Inculcate logical thinking to address a problem and become result oriented with a positive attitude.</li></ul>





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	<ul style="list-style-type: none"> <li>■ Enhance the scientific temperament among the students so as to develop a research culture and implementation of the policies to tackle the burning issues at global and local level.</li> <li>■ Apply the knowledge to develop the sustainable and eco-friendly technology.</li> <li>■ Take up global level research opportunities to pursue Ph.D programme targeted approach and specific competitive exams conducted by service commission</li> <li>■ Accept enormous job opportunities at all level of chemical industries, pharmaceutical industries and placements in R &amp; D.</li> </ul>
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To Pass	At least 40% Marks in the University Examination in each paper and 40% Marks in the aggregate of University and Internal examination in each course of Theory, Practical & 40% Marks in Viva-voce.							
Course Type	Course Code	Name of Course	T/P	Credit	Exam Duration in hrs	Component of Marks		
						Internal	External	Total
Core Course	PS01CCHE51	Inorganic Chemistry	T	4	3	30/10	70/28	100/40
	PS01CCHE52	Organic Chemistry-I	T	4	3	30/10	70/28	100/40
	PS01CCHE53	Topics in Physical Chemistry-I	T	4	3	30/10	70/28	100/40
	PS01CCHE54	Practicals	P	4	6	30/10	70/28	100/40
	PS01CCHE55	Practicals	P	4	6	30/10	70/28	100/40
	PS01CCHE56	Comprehensive Viva- Voce	P	1			50/20	50/20
Elective Course	PS01ECHE51	Polymer Chemistry-I	T	4	3	30/10	70/28	100/40
	PS01ECHE52	Applied and Industrial Chemistry	T	4	3	30/10	70/28	100/40
				25				<b>650</b>
Add-on Course	MOOCs course from Swayam Portal							

