PROGRAMME STRUCTURE
Master of Science in Advanced Organic Chemistry
M.Sc. (Advanced Organic Chemistry) Semester – IV

Programme Outcome (PO) -For MSc Advanced Organic Chemistry Programme	Master of Science program provides extended 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). **Programme outcome: At the end of the program, the students will be able to** 1. Have a deep understanding of both the theoretical and practical concepts in the respective subject. 2. Understanding laboratory processes and use scientific equipment and work independently. 3. Develop research temperament as a consequence of their theory and practical learning. 4. Communicate scientific information in oral and written form. 5. Understand the issue related to nature and environment contexts and think rationally for sustainable development. 6. The students are able to handle unexpected situations by critically analysing the problem.
Programme Specific Outcomes (PSO)- For MSc Advanced Organic Chemistry Programme Semester-I	The Master's programme on Advanced Organic Chemistry offered in this department aims to produce competent Post-Graduate students with knowledge, skills and experience so as to enable them to become successful professionals in Advanced Organic Chemistry. The programme will demonstrate a deep understanding of advanced principles, theories, and methodologies in organic chemistry, including modern synthetic techniques, spectroscopic methods, and mechanistic studies. On successful completion of this course students will be able to: • Students will demonstrate advanced research proficiency by independently designing, executing, and analyzing experiments pertinent to their dissertation and internship projects, showcasing their ability to contribute significantly to the advancement of knowledge in organic chemistry. • Through their dissertation and internship experiences, students will develop innovative problem-solving skills, devising creative solutions to complex challenges in organic synthesis, mechanism elucidation, and the development of novel organic materials or methodologies.

	• Students will effectively communicate their research findings, methodologies, and conclusions through high-quality dissertation reports, scientific presentations, and publications, demonstrating proficiency in disseminating complex scientific information to both specialist and non-specialist audiences. • Apply their learned knowledge in various branches of science, in Industries and Government sectors, in the field of Research a& Development in various industries, Pharmaceuticals, Dyes, Sensors, Renewable energy, Nanomaterials, etc. Apart from this, students are eligible for higher studies leading to Ph.D., in Chemical Sciences. Also, appear for CSIR-UGC NET (JRF & Lectureship) and State Eligibility Test for Assistant Professor in Chemical Sciences.

	Course Code	Course Title	Theory/ Practical	Credit	Contact Hrs/ Week	Exam duration in Hrs.	Component of Marks		
							Internal	External	Total
							Total/ Passing	Total/ Passing	Total/ Passing
Course Type	PT04CAOC51	Modern Organic Chemistry	Theory	4	4	3	30/12	70/28	100/40
	PT04CAOC52	Heterocyclic Chemistry	Theory	4	4	3	30/12	70/28	100/40
	PT04CAOC53	Natural Products and Biopolymers	Theory	4	4	3	30/12	70/28	100/40
	PT04CAOC54 & PT04CAOC55	Project Work / Dissertation / Internship	Practical	8	16	--	60/24	140/56	200/80
	PT04CAOC56	Self-preparation and seminar presentation	---	1	2	--	-	50/20	50/20
Elective Course	PT04EAOC51	Chemistry of materials	Theory	4	4	3	30/12	70/28	100/40
	PT04EAOC52	Organic Physical Chemistry	Theory	4	4	3	30/12	70/28	100/40
	PT04EAOC53	Research Methodology	Theory	4	4	3	30/12	70/28	100/40
	PT04EAOC54	Nanochemistry and Nanotechnology	Theory	4	4	3	30/12	70/28	100/40

Credits (per semester)

Theory + Seminar	:	16
Project Work / Dissertation / Internship	:	08
Self-preparation and seminar presentation	:	01
TOTAL		**25**