MANIPAL UNIVERSITY
JAIPUR

Master of Science (M. Sc.)
Chemistry

Admission 2024-25

About the program

The Department of Chemistry offers a two-year masters program to educate the students with respect to skills and knowledge to practice chemistry and imbibe the concept of sustainable development. Chemistry is a most important area to impart advanced knowledge on various disciplines which include Organic, Inorganic, Physical, Analytical, Material Sciences, Nano sciences, Corrosion Sciences, Natural Products, Composites materials, Plasma technology, Computational Chemistry and Polymer chemistry and their utilization in different industries of food, medicine, agriculture and research. This programme develops the synthesis of chemical entities, analytical and problem-solving skills and prepare the students to take any challenges in their future perspectives. The curriculum has been designed keeping in view the idea that by the end of the course, students must have acquired a firm foundation in all the traditional branches of chemistry and a good exposure to modern reseach.

More about the Department
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Key Highlights of the Program

- High level teaching focused on outcome-based teaching learning
- Well equipped laboratories with all modern amenities
- Individual Research projects
- International presentations and publications by the students
- Interdisciplinary learning with up to date highly competent syllabus

Prominent Recruiters

- Zen Onco
- Byju's
- Jaro Education
- Canary Agro Chemicals
- Hindustan Zinc Limited

Unique Research and Lab Facilities

- Faculties with PhD from prominent institutions and state-of-the-art research profiles.
- Collaborations with eminent scientist worldwide.
- Thrust areas of research are Nanomaterials, Bio-materials, catalysis, Solar sensitize Dyes and Computational and Theoretical research.
- 5 Fully equipped labs with high end instruments for research.
- The department has accesses to most of the modern systems of material characterization like Field Effect Microscope (FESEM), X-ray Diffraction (XRD), UV-Visible Spectroscopy, Photoluminescence (PL) spectroscopy, Thermo-Gravimetric Analysis (TGA), Fourier Transform Infrared (FTIR) spectroscopy etc.

National and International Collaborations

Collaborations with leading research lab of Government of India and overseas.

Career Opportunities

- **Higher Education:** Candidate may pursue for higher studies and opt national exams like IIT JAM, IISER, JNU, DU, IISc, TIFR, IITs for M.Sc. and MSc-PhD integrated programs.
- **Government opportunities:** Junior Scientist/Research Assistant/Lab Officer/Lab Instructor. All Govt jobs after graduation.
- **Corporate Opportunities:** Pharmaceutical companies (Johnson & Johnson, Pfizer, Sanofi, Merck, GSK (GlaxoSmithKline), AstraZeneca, Panacea Biotech Limited, Dr. Reddy's Laboratories Limited) etc in the R&D laboratories, Cosmetic Industries, Agrochemical Industries, Oil and Paint Industries, Polymer and materials Industries, Clinical Research Associate, Quality Controls and Marketing, IPR.
- Startup and Entrepreneur Opportunities in various chemical, Pharmaceutical and material fields.

The MUJ EDGE (Why MUJ)

- Best in-class infrastructure, including the state-of-the-art research facilities and a modern digital library
- NAAC A+ and UGC Accredited Institution
- Research-oriented, well-qualified and internationally renowned faculty
- Well stocked library
- Well-equipped laboratories with ultramodern infrastructural facilities
- Regular invited talks from experts
- Student seminars, project work and guest lectures by eminent speakers
- Placement assistance program
- Regular Industrial exposure to students with emerging technologies in chemical companies
- Participation in technical events, sports and other cultural activities to showcase their talents
- Collaborations with prestigious institutions in India and abroad
- Curriculum based on CSIR-NET and GATE syllabus
- Recruitment opportunity in research project/PhD
- Laboratory infrastructure: FTIR, GC-MS, Fluorometer, CO2 Incubator, HPLC, AAS, Centrifuge and many more.

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Fee structure

Tution fee (p.a.)	Registration Fee (One Time)	Caution Deposit Refundable (One Time)	Total Course Fees (including Caution Deposit)
1,09,000	10,000	10,000	2,38,000

(International - USD, Total Fee for 2 Years - 5,600)

Eligibility

Candidate must have passed BSc degree from recognized University / Institution or equivalent qualification as recognized by Association of Indian Universities (AIU) or other competent body with minimum of 50% marks in aggregate.

Scholarships

- Tuition Fee Concession for MUJ Graduate
- Scholarships for Local Region Students
- Merit Scholarships

Curriculum (Only Scheme)

Year	FIRST SEMESTER					
	Course Code	Course Name	L	T	P	C
I	CY6101	Chemistry of Main Group Elements	2	1	0	3
	CY6104	Stereochemistry, Reaction Mechanism and Aromaticity	2	1	0	3
	CY6105	Spectroscopy	3	1	0	4
	CY6107	Surface Chemistry and Thermodynamics	2	1	0	3
	CY6108	Symmetry and Group Theory	2	1	0	3
	CY6130	Advanced Chemistry Laboratory - I	0	0	12	6
			11	5	12	22
	Total Contact Hours (L + T + P)		28			

Curriculum (Only Scheme)

SECOND SEMESTER					
Course Code	Course Name	L	T	P	C
CY6201	Chemistry of Transition Metals	2	1	-	3
CY6202	Analytical Chemistry and Bonding	3	1	-	4
CY6204	Advanced Organic Chemistry of Multiple Bonds	2	1	-	3
CY6207	Quantum Chemistry, Electrochemistry and Chemical Kinetics	2	1	-	3
CY6230	Advanced Chemistry Laboratory - II	0	0	8	4
MA6205	Research Methodology and Technical Writing	2	1	0	3
CY6271	Student Seminar	-	-	-	1
		11	5	8	21
Total Contact Hours (L + T + P)		24			

	THIRD SEMESTER					
	CY7101	Organometallic Chemistry	2	1	0	3
	CY7104	Photochemistry, Pericyclic Reactions and Heterocyclic Chemistry	2	1	0	3
II	CY7107	Solid State Chemistry	2	1	0	3
	CY7130	Advanced Chemistry Laboratory - III	0	0	6	3
	CY71xx	**DSE - I	2	1	0	3
	CY71xx	**DSE - II	2	1	0	3
	CY71xx	**DSE - III	2	1	0	3
			12	6	6	21
	Total Contact Hours (L + T + P)		24			

FOURTH SEMESTER					
CY8270	Major Project	0	0	32	16
		0	0	32	16
Total Contact Hours (L + T + P) + OE		32			

DISCIPLINE SPECIFIC ELECTIVE (DSE)

DSE – I (Group A (Inorganic))	DSE – II (Group B (Organic))	DSE – III (Group C (Physical))
1. CY7140: Photo Inorganic Chemistry	1. CY7150: Medicinal Chemistry	1. CY7160: Computational Chemistry
2. CY7141: Bio-Inorganic Chemistry	2. CY7151: Chemistry of Biomolecules	2. CY7161: Biophysical Chemistry
3. CY7142: Nuclear and Radiochemistry	3. CY7152: Bio-Organic Chemistry	3. CY7162: Advanced Quantum Chemistry
4. CY7143: Metallurgical Science	4. CY7153: Textile Chemistry	4. CY7163: Liquid State
		5. CY7164: Catalysis Technology

GE: Generic Electives, DSE: Discipline Specific Electives, SEC: Skill Enhancement Course

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Admission Process

Application form initiated through our website
admissions.jaipur.manipal.edu

Applicants must submit a completed application form with relevant documents within the due date.

Our counsellors will guide candidates through the admission process, which is as per regulatory requirements.

FAQ

Please visit the FAQ section on our website to know more about the admission process.

Admission Team Contact Details

Hostel Details

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MANIPAL UNIVERSITY
JAIPUR
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