POSTGRADUATE PROGRAM

Master of Science

Chemistry (General / Analytical / Organic / Materials Chemistry)

DURATION & MODE
2 Years (4 Semesters)
Day Scholar, Full-Time

PROGRAMME OVERVIEW

This two-year postgraduate programme offers a comprehensive study of the major branches of chemistry, developing a critical and analytical approach across the discipline. Building on undergraduate foundations, students specialise in Organic, Analytical, General, or Materials Chemistry. The first two semesters give a broad, harmonious view of the subject; specialisation courses follow from the third semester onward, alongside an industrial/institutional project.

Equal weight is placed on theory and laboratory practice, delivered through lectures, demonstrations, seminars, projects, and presentations.

PROGRAMME HIGHLIGHTS

- Specialisation-oriented curriculum across Organic, Analytical, Materials, and General Chemistry, aligned with research and industry needs.
- Strong research and practical training through industrial/institutional projects, journal clubs, seminars, and hands-on instrumentation.
- Experienced faculty mentorship supported by well-equipped laboratories and a collaborative, interdisciplinary research culture.
- Career and higher-education readiness for pharmaceuticals, biotechnology, forensic science, chemical industries, academia, and Patents/IPR, with CSIR-NET coaching and placement support.
- A semester-long internship and research project in the final semester, along with access to advanced instrumentation.

PROGRAMME OUTCOMES (POS)

PO1 — **Disciplinary Expertise:** Apply in-depth knowledge and understanding of advanced concepts in the respective discipline to innovate and solve complex scientific problems.

PO2 — **Critical Thinking and Problem Solving:** Develop critical thinking, analytical reasoning, and problem-solving skills to address complex real-world challenges with scientific temper and objectivity.

PO3 — **Research Skills:** Demonstrate independent research capabilities with scientific integrity and objectivity to advance scientific knowledge and technological innovation.

PO4 — **Professional skills:** Demonstrate effective science communication, sustainable technology use, and a strong commitment to professional ethics and collaborative skills to excel in academic, research, and professional roles globally.

PO5 — **Scientific Social Responsibility:** Demonstrate awareness of environmental sustainability, cultural diversity, and inclusivity, contributing to the betterment of society.

ACADEMIC ROADMAP

Programme Structure

MSc Chemistry – Semesters I & II (Common / Core)

MSc Semester I — Core Foundations

- MCH481-1: Mathematics for Chemists
- MCH401-1: Inorganic Chemistry I
- MCH402-1: Organic Chemistry I
- MCH403-1: Physical Chemistry I
- MCH404-1: Analytical Chemistry
- MCH411-1: Inorganic Chemistry Practical I
- MCH482-1: Introduction to Research in Chemical Sciences
- MCH412-1 / MOC412-1: Specialization Practical Elective: Organic Chemistry Practical I / Instrumental Techniques in Physical Chemistry
- HED-NEP182-1: Holistic Development

MSc Semester II — Core Foundations

- MCH401-2: Inorganic Chemistry II
- MCH402-2: Organic Chemistry II
- MCH403-2: Physical Chemistry II
- MCH404-2: Spectroscopy I
- MCH411-2: Inorganic Chemistry Practicals II
- MCH412-2: Physical Chemistry Practicals
- MCH481-2: Computational Chemistry and Artificial Intelligence
- MCH482-2: Scientific Writing and Communication
- HED-NEP182-2: Holistic Development

MSc Chemistry – Semesters III & IV (Specializations & Elective Tracks)

1. General Chemistry Track (MCH) — Specialization

Semester III (General Chemistry)

- MCH501-3: Spectroscopy II
- MCH502-3: Organic Chemistry III
- MCH503-3: Solid State Chemistry
- MCH504-3: Analytical Chemistry II
- MCH511-3: Analytical Chemistry Practical I
- MCH512-3: Organic Chemistry Practical II

Semester IV (General Chemistry)

- MCH501-4: Organic Chemistry IV
- MCH502A-4: Teaching and Learning in Chemistry
- MCH502B-4: Research in Chemical Sciences
- MCH502C-4: Chemistry in Industry
- MCH582-4: Internship
- MCH583-4: Research Project

2. Organic Chemistry Specialization (MOC) — Specialization

Semester III (Organic Chemistry)

- MCH501-3: Spectroscopy II
- MOC502-3: Organic Synthesis
- MOC503-3: Organic Reaction Mechanisms and Heterocyclic Compounds
- MOC504-3: Medicinal and Natural Products Chemistry
- MOC511-3: Organic Chemistry Practical II
- MOC512-3: Organic Chemistry Practical II

Semester IV (Organic Chemistry)

- MOC501-4: Stereochemistry and Retro Synthetic Analysis
- MCH502A-4: Teaching and Learning in Chemistry
- MCH502B-4: Research in Chemical Sciences
- MCH502C-4: Chemistry in Industry
- MCH582-4: Internship
- MCH583-4: Research Project

3. Analytical Chemistry Specialization (MAC) — Specialization

Semester III (Analytical Chemistry)

- MCH501-3: Spectroscopy II
- MAC502-3: Advanced Analytical Techniques
- MAC503-3: Principles of Chemical Analysis
- MAC504-3: Chemistry of Materials
- MAC511-3: Analytical Chemistry Practical I
- MAC512-3: Analytical Chemistry Practical II

Semester IV (Analytical Chemistry)

- MAC501-4: Spectroscopy III
- MCH502A-4: Teaching and Learning in Chemistry
- MCH502B-4: Research in Chemical Sciences
- MCH502C-4: Chemistry in Industry
- MCH582-4: Internship
- MCH583-4: Research Project

4. Materials Chemistry Specialization (MMC) — Specialization

Semester III (Materials Chemistry)

- MCH501-3: Spectroscopy II
- MMC502-3: Fundamentals of Materials Chemistry
- MMC504-3: Advanced Fabrication and Characterization of Materials
- MMC511-3: Materials Chemistry Practicals I
- MMC512-3: Materials Chemistry Practicals II

Semester IV (Materials Chemistry)

- MMC501-4: Materials for Sustainable Energy
- MCH502A-4: Teaching and Learning in Chemistry
- MCH502B-4: Research in Chemical Sciences
- MCH502C-4: Chemistry in Industry
- MCH582-4: Internship
- MCH583-4: Research Project

FUTURE PROSPECTS

Career Paths

- Doctoral Researcher (PhD)
- Academic Lecturer & Educator
- Research Associate
- Science Consultant
- Pharmaceutical Scientist
- Materials Science Engineer
- Chemical Manufacturing
- Regulatory Affairs Specialist
- Environmental Scientist & Consultant
- Forensic Scientist
- Patent Analyst & IPR Consultant
- Analytical Chemist

ENROLLMENT GUIDE

Admission Process

STEP 1 — Register
Register with your Email ID and log in to the Admission Portal.

STEP 2 — Apply Online
Fill the application form and pay the application fee.

STEP 3 — Selection Process
Appear for the entrance test (if applicable), Skill Assessment, Micro Presentation and Interview.

STEP 4 — Result
Check the login page for results; if selected, an offer letter is attached.

STEP 5 — Fee Payment
Pay the course fee online and complete the admission process.

REQUIREMENTS

Eligibility & Selection Process

ELIGIBILITY CRITERIA

Eligibility: A Bachelor's degree with Chemistry as a core paper in all years of the programme. An aggregate of 50% and above from a recognised University in India or abroad, recognised by UGC/AIU. Candidates appearing for final degree examinations in March-June 2027 are also eligible, subject to having secured 50% or above aggregate in all completed Semesters/Years.

APPLICANTS PURSUING AN INTERNATIONAL CURRICULUM ARE ASSESSED AS PER AIU STIPULATIONS.

SP PROCESS	SP PARTICULARS	SP TIME	SP MODE
Skill Assessment (SA) | Micro Presentation (MP) & Personal Interview (PI)	**Skill Assessment (SA):** Candidate will be given a topic to write. **Micro Presentation (MP):** Candidate should be able to talk for 90seconds, on a topic given by the panel. **Personal interview (PI):** duration: 10 minutes	As per E Admit Card	Venue Based SA_MP_PI
Academic Performance (AP)	**Academic Performance (AP):** Assessment of past performance in Class 10, Class 12, and Undergraduate Degree *The selection process (SA_MP_PI) will be held in person at the venue and date selected while submitting the application form online.*		

Documents: Applicants must upload all qualification-related documents through the link provided while submitting the online application form. Failure to upload the required documents will result in the rejection of the application.

***Note:** Applications submitted without mark sheets/report cards, or with unclear or illegible scanned copies, will be rejected and marked as Not Eligible.*

Christ University Admissions Portal
Office Timings: Monday to Friday: 09:00 AM to 04:00 PM, Saturday: 09:00 AM to 12:00 PM (Office remains closed on Sundays, Third Saturdays, Government Holidays and Any special events)