



MS & PhD
C H E M I S T R Y

.....
EMPOWERING EVERY JOURNEY

Syed Babar Ali School of Science and Engineering



SYED BABAR ALI SCHOOL OF SCIENCE AND ENGINEERING (SBASSE)

LUMS and SBASSE Fostering a Dynamic Learning Environment

Founded in 1985 as a not-for-profit, LUMS believes in making quality education accessible while breaking academic, geographic, and socio-economic barriers to enhance students' academic exposure.

SBASSE at LUMS is advancing innovative teaching and impactful research in science and technology. The MS programmes offer rigorous, professional, and research-focused training, with two pathways: MS-by-Coursework or MS-by-Thesis. The PhD programmes prepare students for independent, high-quality research. Key milestones include Coursework, Comprehensive (Qualifying) Exams, Thesis Proposal Defense, at least one article in a peer-reviewed journal, and final PhD Thesis Defense.

WHY MS & PHD CHEMISTRY AT LUMS?

Pursue advanced studies in Chemistry at SBASSE through dynamic MS and PhD programmes designed for innovation and impact. With world-class faculty, cutting-edge labs, and interdisciplinary research, students tackle real-world challenges in health, energy, and the environment. Whether you're aiming for academia or industry, LUMS equips you to lead.

- **Interdisciplinary Research:** Projects span traditional chemistry and its intersections with Biology, Medicine, Physics, Materials Science and the Environmental Sciences
- **Cutting-Edge Research Facilities:** Access advanced equipment like NMR, SEM, XRD, ICP, GC-MS, HPLC, DSC, VSM, FT-IR, UV-Vis, and more
- **Faculty Excellence:** Highly qualified, research-active faculty committed to mentoring and innovation
- **International Collaborations:** Active partnerships with institutions in USA, UK, Germany, Switzerland, Turkey, China, and Saudi Arabia
- **Various Research Domains:** Nanotechnology, Macromolecular Chemistry, Green Synthesis & Catalysis, Drug Discovery & Medicinal Chemistry, Materials Chemistry and more
- **Interdisciplinary Focus:** Strong emphasis on solving global challenges in health, energy, environment, and industry

PROMINENT PLACEMENTS

Our graduates ascend to prominent roles, pursuing academics at world-renowned institutions, securing fully funded PhD positions, and driving innovation in leading industries.



HARVARD
UNIVERSITY



JOHNS HOPKINS
UNIVERSITY



THE UNIVERSITY OF
CHICAGO



UNIVERSITY OF
CAMBRIDGE



Massachusetts
Institute of
Technology



TEXAS A&M
UNIVERSITY.



Yale



RESEARCH AREAS

The Department of Chemistry and Chemical Engineering is home to a diverse and talented group of faculty members, who actively engage in collaborative teaching and interdisciplinary research. Their research areas encompass a wide range of topics, including:

■ ANTI-CANCER DRUG DISCOVERY

Dr. Rahman Shah Zaib Saleem

■ BIOORGANIC AND MEDICINAL CHEMISTRY

Dr. Muhammad Saeed

■ CATALYSIS AND GREEN CHEMISTRY

Dr. Ghayoor Abbas

■ CATALYSIS DESIGN

Dr. Muhammad Zaheer

■ ENERGY MATERIALS

Dr. Ali Rauf

■ FUNCTIONAL NANOMATERIALS

Dr. Irshad Hussain

■ HETEROGENEOUS CATALYSIS

Dr. Qandeel Almas

■ INDOOR AIR QUALITY MONITORING

Dr. Shahana Khurshid

■ MEMBRANE SCIENCE AND ENGINEERING

Dr. Faheem Hassan Akhtar

■ SUSTAINABLE AND GREEN INDUSTRIAL PROCESSES

Dr. Usman Bin Shahid

■ SUSTAINABLE ENVIRONMENTAL SOLUTIONS

Dr. Qasim Imtiaz

■ WATER TREATMENT

Dr. Tauqeer Abbas

■ SOFT MATTER AND INTERFACES

Dr. Basit Yameen

■ SOLID STATE CHEMISTRY

Dr. Falak Sher

■ POLYMERS AND NANOCOMPOSITES

Dr. Habib-Ur-Rehman

■ NANOFIBERS AND COMPOSITES

Dr. Salman Nosheen Arshad



CAREER PROSPECTS

Our graduates pursue careers as:

- **Research Scientists** in pharmaceuticals, materials, or chemical industries
- **Quality Control/Assurance Analyst** in manufacturing or food industries
- **Medical Laboratory Technologist** working in hospitals or diagnostics labs
- **Technical Writer** creating scientific documentation for companies
- **Teaching Faculty** in colleges and universities
- **Environmental Consultant** advising on chemical safety and sustainability
- **Industrial Chemist** working in production, formulation, or R&D
- **Further Studies** at leading international universities, often with scholarships



“ LUMS has been a stepping stone for most of its students in achieving the ambition they had set for themselves. A diverse campus life and exceptional growth opportunities helped me realise my true potential and paved the way towards earning a PhD in Chemistry from the University of Massachusetts Amherst, USA. I owe much of my professional success to the strong educational foundation laid by LUMS.

MUHAMMAD ABDULLAH
MS Chemistry '16
Technical Lead and Programme Manager - Advanced Packaging Global Foundries

ADMISSION CRITERIA AND FINANCIAL SUPPORT

ADMISSION IS PURELY MERIT-BASED.

Scan the code to explore eligibility, deadlines, how to apply to the MS Chemistry programme and find out how LUMS can support your academic journey.



PhD Chemistry is a fully funded programme. Scan the code to find out details on how to apply.



PHD CHEMISTRY ADMISSION CRITERIA FOR FOREIGN NATIONALS

Foreign nationals must obtain a visa and a no-objection certificate to study at LUMS, with support provided by the university. Applicants from developing countries may also apply via the TWAS-UNESCO portal: <https://rb.gy/j83y7v>. Scan to find out more.



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