



**MS & PHD
CHEMISTRY**



MAKE YOUR ***IMPACT***

**SYED BABAR ALI
SCHOOL OF SCIENCE AND ENGINEERING**



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Founded in 1985 as a not-for-profit, LUMS has pioneered innovative educational trends. The expanse of research and teaching at LUMS offers its community 'Learning Without Borders' by breaking academic, geographic, and socio-economic barriers to enhance students' academic exposure and make education accessible to all.

The Syed Babar Ali School of Science and Engineering (SBASSE) at LUMS is at the forefront of research and teaching in Pakistan. The MS programmes at SBASSE are rigorous and designed to impart specialised professional and research-oriented training to students. All SBASSE departments offer at least two options to choose from: MS-by-Coursework or MS-by-Thesis. The School's PhD programmes prepare students to think scientifically and conduct high-quality research independently. Major milestones that must be achieved for the successful completion of the PhD degree include the Coursework, Comprehensive (Qualifying) Examination, Thesis Proposal Defense, at least one peer-reviewed journal article, and PhD Thesis Defense.



WHY MS AND PHD CHEMISTRY AT LUMS?

LUMS AND SBASSE FOSTER A DYNAMIC LEARNING ENVIRONMENT

The Department of Chemistry and Chemical Engineering has established itself as an internationally recognised centre for graduate teaching and research. The Department comprises a research-active faculty working in diverse disciplines, including Catalysis, Early-Stage Drug Design, Energy, Environment, Materials Chemistry, Nanoscience, and Polymer Technology.

Students benefit from excellent teaching and research labs that are well equipped with state-of-the-art facilities and supplies, including spectroscopic, structural, and materials characterisation tools. They also receive training on interdisciplinary research projects interfacing Chemistry with other science and engineering disciplines. Additionally, they are able to leverage the global network of alumni placed in various educational and industrial sectors.

PROMINENT PLACEMENTS

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





RESEARCH AREAS

The Department of Chemistry and Chemical Engineering is home to a diverse and talented group of faculty members. 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
- **CATALYST DESIGN**
Dr. Muhammad Zaheer
- **ENERGY MATERIALS**
Dr. Ali Rauf
- **ENERGY SYSTEM SIMULATIONS**
Dr. Muhammad Shoaib
- **FUNCTIONAL NANOMATERIALS**
Dr. Irshad Hussain
- **HETEROGENEOUS CATALYSIS**
Dr. Qandeel Almas
- **INDOOR AIR QUALITY MONITORING**
Dr. Shahana Khurshid
- **MEMBRANE SCIENCE AND ENGINEERING**
Dr. Faheem Hassan Akhter
- **NANOFIBERS AND COMPOSITES**
Dr. Salman Nosheer Arshad
- **POLYMERS AND NANOCOMPOSITES**
Dr. Habib-Ur-Rehman
- **PROCESS SYSTEM ENGINEERING**
Dr. Rofice Dickson
- **SOFT MATTER AND INTERFACES**
Dr. Basit Yameen
- **SOLID STATE CHEMISTRY**
Dr. Falak Sher
- **SUSTAINABLE ENVIRONMENTAL SOLUTIONS**
Dr. Qasim Imtiaz
- **WATER TREATMENT**
Dr. Tauqeer Abbas



ADMISSION CRITERIA

Admission is purely merit-based and rests on the following criteria:

MS & PHD PROGRAMMES

- Academic Record
- Performance in Admission Tests
- Research Statement (for PhD applicants only)
- Online Application Submission
- Online Submission of Supporting Documents and Fee Payment
- Letters of Recommendation (for PhD applicants only)
- Application Review
- Interview Performance (if shortlisted)

Note: These are the minimum criteria applicants must fulfil to be eligible to apply. Meeting these criteria does not guarantee admission to LUMS.

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on MS Chemistry





PHASER

PHD ADMISSION CRITERIA FOR FOREIGN NATIONALS

The following criteria applies to all foreign applicants:

- Academic Record
- Research Background
- Letters of Recommendation
- Online Application Submission
- Online Submission of Supporting Documents
- Application Review
- Online Test and Interview Performance (if shortlisted)

To study at LUMS, foreign nationals must follow requirements such as obtaining a visa and a no-objection certificate from Pakistani authorities. LUMS will assist in this process.

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MUHAMMAD ABDULLAH

MS Chemistry '16

“LUMS has been a stepping stone for most of its students in achieving the ambitions 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. Today, I work as a Principal Engineer for Technology Development at GlobalFoundries, New York, and owe much of my professional success to the strong educational foundation laid by LUMS.”



FINANCIAL SUPPORT

- Merit scholarships
- Partial tuition fee waivers for students pursuing MS in basic sciences
- LUMS Financial Aid (for local applicants only) aims to reduce financial barriers to higher education, nurturing an inclusive and vibrant community where academically distinguished students can realise their full potential and achieve their professional aspirations. At the graduate level, financial aid is provided in the form of an interest-free loan.
- External scholarships (support and eligibility for these vary depending on the donor)
- Options to work as Research or Teaching Assistants (subject to availability)
- Full funding of the PhD, which covers tuition, registration, admission fee, and a monthly stipend (subject to supervisor's approval) for 4 years



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