PHD ADMISSION CRITERIA **FOR FOREIGN NATIONALS**

ADMISSION **CRITERIA**

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

- Academic Record
- Performance in Admission Tests
- Research Statement
- Online Application Submission
- Online Submission of Supporting Documents and Fee Payment
- Letters of Recommendation
- 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.

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.

Scan for more information

ALEENA NADEEM

PhD Chemical & Environmental Engineering Student

"As a PhD student at LUMS, my academic journey has been a rewarding experience. My research focuses on developing innovative and sustainable solutions for treating wastewater, addressing one of the most critical environmental challenges today. The programme's interdisciplinary approach lets me explore advanced methodologies and collaborate with experts in the field. LUMS has provided me with the tools to not only excel academically but also contribute meaningfully to global sustainability efforts. In addition to developing technical expertise, the programme excels at promoting professional growth and facilitating collaboration on real-world projects."

FINANCIAL **SUPPORT**

LUMS offers full funding for the PhD programme for 4 years, which covers:

- Admission fee
- Tuition fee
- Semester registration fee
- Monthly stipend, subject to the approval of the supervisor

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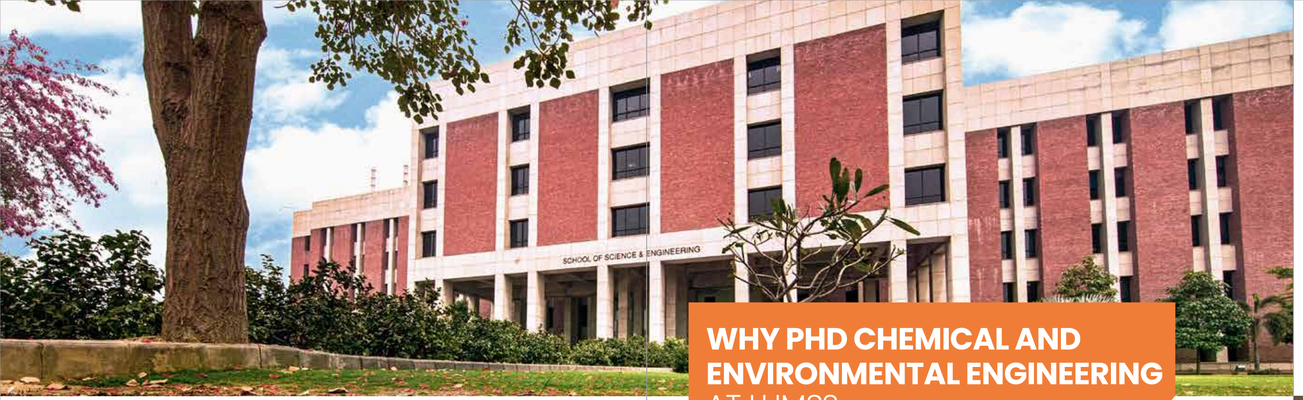
Learning Without Borders

PHD CHEMICAL AND ENVIRONMENTAL ENGINEERING

SYED BABAR ALI SCHOOL OF SCIENCE AND ENGINEERING



SYED BABAR ALI SCHOOL OF SCIENCE AND ENGINEERING

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 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 PHD CHEMICAL AND ENVIRONMENTAL ENGINEERING AT LUMS?

LUMS AND SBASSE FOSTER A DYNAMIC LEARNING ENVIRONMENT

The PhD in Chemical and Environmental Engineering will prepare students to address contemporary and emerging environmental issues, covering areas such as Sustainable Energy Resources, Environmental Monitoring, Catalysis and Reaction Engineering, Molecular Engineering of Materials, and Process Systems Engineering. As an integral component of graduate education, the programme engages students in rigorous research alongside coursework and provides fully equipped clusters, groups, and labs.

PHD CHEMICAL AND ENVIRONMENTAL ENGINEERING

The PhD Chemical and Environmental Engineering programme enables students to stay on top of growing trends in information and technology. The programme is designed to produce researchers and scholars who will advance the field by contributing to knowledge creation in their specialised disciplines and disseminate it through scholarly publications and industry collaboration.

This programme integrates Chemical and Environmental Engineering with an emphasis on Sustainable Production as well as Environmental Remediation. It is unique in Pakistan, as no other graduate programme integrates these disciplines with a focus on advances in Separations, Energy, and Nanomaterials.

Faculty members at the Department of Chemistry and Chemical Engineering have developed impactful international collaborations with prominent national and international research groups in the USA, UK, Germany, Switzerland, Turkey, China, and Saudi Arabia. These collaborations are instrumental in keeping faculty abreast of the latest developments in the field, letting them use advanced technology platforms and high-tech equipment currently not available anywhere in Pakistan.

THEMES AND COURSES

This programme will train students to translate molecular interactions into products and processes. The faculty are actively engaged in teaching and cutting-edge research in the fundamental sciences and applied engineering fields. Their research has been published in prestigious academic journals.

- **SUSTAINABLE ENERGY RESOURCES**
  - Functional Polymers and Interfaces
  - Energy Materials
  - Functional Nanomaterials
  - Solid State Chemistry
- **ENVIRONMENTAL SCIENCE AND ENGINEERING**
  - Air Quality Monitoring
  - CO_2 Capture
  - Water and Wastewater Treatment
  - Functional Polymers and Interfaces
- **CATALYSIS AND REACTION ENGINEERING**
  - Catalyst Design and Biomass Valorisation
  - Heterogeneous Catalysis
  - Catalysis and Green Chemistry
- **MOLECULAR ENGINEERING OF MATERIALS**
  - Membrane Science and Engineering
  - Medicinal Chemistry
  - Drug Discovery
  - Ionic Liquids and Molecular Simulation
  - Polymers and Nanocomposites
- **PROCESS SYSTEMS ENGINEERING**
  - Process Systems
  - Energy Integration and Optimisation
  - Design and Analysis of Chemical Processes