ADMISSION CRITERIA

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

- Academic Record
- Performance in Admission Test
- Application Review
- Submission of complete online application, application processing fee and supporting documents by the stipulated deadline
- Interview Performance (if shortlisted)
- Letters of Recommendation
- Research Statement and Research Presentation

Note: This is the minimum criteria that applicants need to fulfil in order to be eligible to apply. Fulfilment of this criteria does not guarantee admission to LUMS.

PHD ADMISSION CRITERIA
FOR FOREIGN NATIONALS

The following criteria applies to all foreign applicants:

- Academic Record
- Research Background
- Online Test and Interview (if shortlisted)
- Letters of Recommendation
- Application Review
- Submission of complete online application and supporting documents by the stipulated deadline

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. Additionally, foreign nationals from developing countries can also apply through The World Academy of Sciences and UNESCO portal (https://rb.gy/j83y7v).

Scan for more information

UZAIR AHMAD
PHD CHEMICAL & ENVIRONMENTAL ENGINEERING STUDENT

"As a PhD student, I've found my academic journey to be wonderful. My research revolves around the forefront of membrane-based separation—an innovative technology crucial for modern chemical processes. This not only enhances efficiency but also aligns seamlessly with the programme's core focus on sustainable production principles. Beyond honing technical skills, the programme stands out for fostering professional growth through networking opportunities, internships, and real-world project collaborations."

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

LUMS
A Not-for-Profit University

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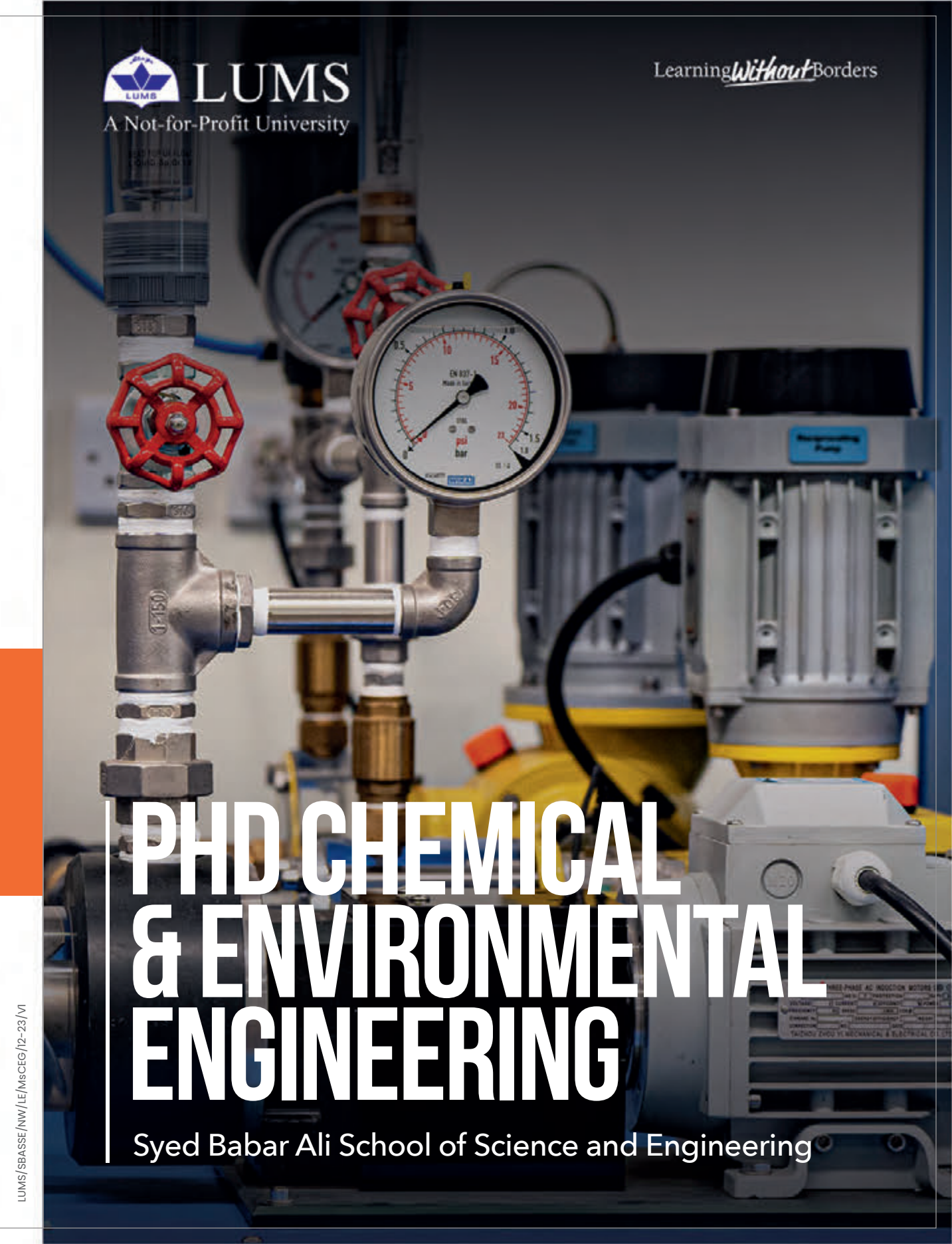
PHD CHEMICAL & ENVIRONMENTAL ENGINEERING
Syed Babar Ali School of Science and Engineering

وہی جہاں ہے تیرا جس کو تو کرے پیدا

علامہ اقبال

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.

Syed Babar Ali School of Science and Engineering (SBASSE) at LUMS is making significant strides in the experimentation of teaching and learning, and making impactful contributions to science and technology. 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 & ENVIRONMENTAL ENGINEERING AT LUMS?

LUMS AND SBASSE FOSTER A DYNAMIC LEARNING ENVIRONMENT

QS WORLD UNIVERSITY RANKINGS BY SUBJECT

#301-350
Computer Science and Information Systems

#351-400
Engineering – Electrical and Electronics

#401-450
Engineering and Technology

#501-550
Physics and Astronomy

The PhD in Chemical and Environmental Engineering will prepare you to address contemporary and emerging environmental issues, including 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.
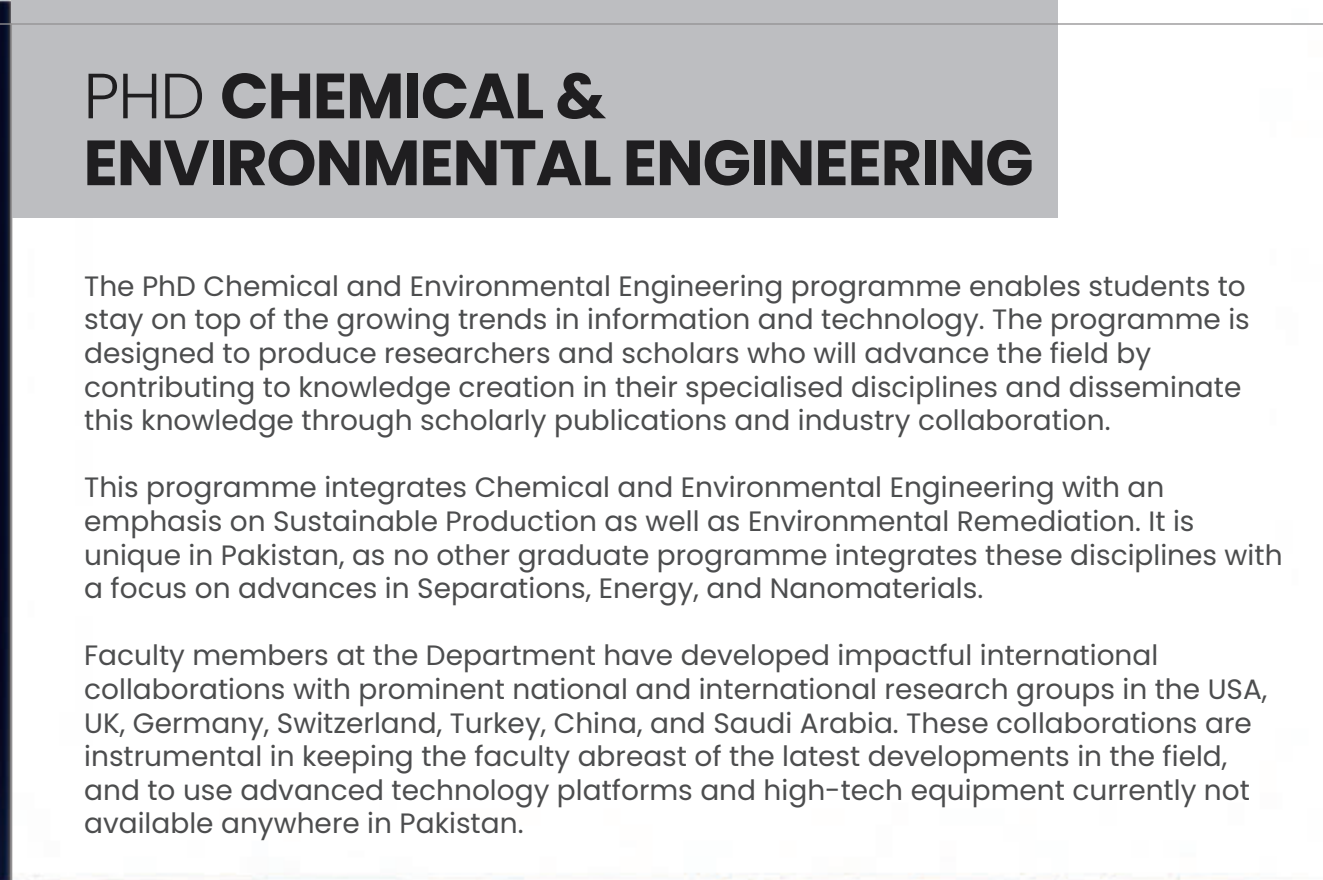
PHD CHEMICAL & ENVIRONMENTAL ENGINEERING

The PhD Chemical and Environmental Engineering programme enables students to stay on top of the 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 this knowledge 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 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 the faculty abreast of the latest developments in the field, and to 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