WHY PHYSICS?

Physics focuses on probing fundamental physical aspects of the universe and the underlying mathematics, as well as novel applications in diverse areas including Nanoscience, Optics, Nanophotonics, Quantum Dynamics and Magnetic Materials. All these are in the realm of SBASSE’s Physics Programme.

The Department encourages students to get involved in research questions and exploratory experiments outside the formal classroom or laboratory coursework. Regular seminars and colloquia are led by faculty, students and distinguished speakers from outside LUMS providing a chance to keep abreast of cutting-edge, high impact research.

PROGRAMMES OFFERED

- MS
- PhD

CAREER OPPORTUNITIES

- Physics graduates are readily accepted in programmes at the world’s top institutes such as MIT, Harvard, Oxford etc.
- Graduates are employed by industry and academia in Pakistan and abroad

RESEARCH OPPORTUNITIES

The Department’s physicists encourage students to pursue independent research supervised by faculty members engaged in basic as well as translational research. Research is conducted in the following areas:

- Spin and Photon Physics
- Quantum Dynamics
- Plasmonics and Nanoengineered Materials
- Fundamental Theory
- Photonics
- Cosmology
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FACILITIES

• Laboratories in Solid State Physics, Nanoscience, Optics and Photonics, Radiation Physics and Measurement and Instrumentation house mostly home-grown facilities in diverse areas of physics
• Home-grown facilities at the Labs include diverse areas of physics including synthesis of new materials, cryogenic and high temperature transport, electrical, thermal and magnetic properties measurements, homebuilt atomic force microscopy and magnetic resonance devices, optical spectroscopy, optical and Kerr microscopy, sensitive imaging, light modulation, radiation detection, X-ray fluorescence, quantum optics, single photon detection, electrodeposition, electro spinning, sputter coating, and high speed electronic test and measurement equipment, to name a few.

Generous Tuition Fee Waivers for all MS Basic Sciences Students
- 45% for new students
- 50% for returning students

100% scholarship for PhD students
“LUMS provides students like me, who come from modest backgrounds, the chance to acquire a world class education by giving full financial aid. The state-of-the-art Physics Lab at the department helped me develop my skills; I had the freedom to access and experience new learnings under the guidance of phenomenal teachers. I would highly recommend the LUMS MS Physics programme to aspiring physicists.”

“I chose the LUMS MS Physics programme because the faculty comprises of distinguished science scholars from the best universities of the world. Secondly, the labs are very well equipped and open 24/7. Attending the programme was a life changing experience for me; I came in with very little knowledge and left well-equipped to face any challenge.”

Aamir Shafique is currently a PhD student at the Department of Physics, University of Ulsan, South Korea

**ADMISSION CRITERIA**

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

- Academic record
- GRE or LUMS Graduate Admission Test Performance*
- Interview performance (if and where applicable)
- Completed online application form along with all supporting documents

* For admission test details, visit: [https://admission.lums.edu.pk/graduate-programmes](https://admission.lums.edu.pk/graduate-programmes)

**FINANCIAL SUPPORT**

- Loan Options
- Merit Scholarships
- External Scholarships (if available)
- Teaching Assistantships
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- 50% Tuition Fee waiver for returning students
- 100% Scholarship for PhD students

For details, visit: [https://financial-aid.lums.edu.pk](https://financial-aid.lums.edu.pk)