



**FORMAN  
CHRISTIAN  
COLLEGE**  
(A CHARTERED UNIVERSITY)

## Department of Physics

Physics has been taught at Forman Christian College (A Chartered University) since it was established in 1864. The Department of Physics was instituted in 1907 with Prof DJ Fleming as its first Head. A long line of distinguished professors and prominent scientists have served in this Department, including Nobel Laureate Dr Arthur Compton, Prof JM Benade and Dr Piara Singh Gill. Dr Compton conducted most of his research on cosmic rays while he was a faculty member at FCC, which led to his receiving the Nobel Prize for Physics in 1927. Prof JM Benade was one of the longest-serving professors in the Department, eventually retiring as its Head in 1970. He was an active researcher and the Asian representative in Dr Compton's international research team. Dr Compton's student Dr Piara Singh Gill was a faculty member at FCC from 1940 to 1947 and was very active in research. He was associated with the University of Chicago and the Georgia Institute of Technology. All these scientists and professors have made significant contributions to the field of Physics.

Today, the well-qualified and experienced faculty is involved in various research programs. The last few years have been busy and productive for the Department. At the undergraduate level, the Department is offering a 4-year degree in Physics. The Department has also launched MPhil and PhD Physics programs, to train graduate students as young scientists to sync with international standards in the research and development sector of Pakistan.

Merit-based financial awards available  
only in MPhil Physics

PEEF scholarships available  
for eligible students only in MPhil Physics

### MPhil Physics

The MPhil Physics is a two-year program consisting of two semesters of coursework followed by two semesters of research. Coursework includes core courses and electives. Research is conducted in Experimental Material Science, Nanophysics and Nanotechnology and Theoretical Physics. The program consists of four regular semesters of 40 credit hours in total; 24 credit hours of coursework must be completed in the first two semesters while the 3rd and 4th semesters will be dedicated to research. Limited teaching assistantships are available.

### Admission Criteria

- A 4-year BS (Hons) degree from an HEC-recognized university in either Physics or Mathematics with a minimum of 2.5 CGPA and 130 credit hours  
OR
- A conventional MSc in Physics or Mathematics with a minimum of 60% marks

### NOTE

Acceptance is based upon the 1) departmental test, 2) interview and 3) an overall evaluation of the candidate, including: academic achievement, statement of purpose and English language proficiency.

Provisional admission can be sought by students awaiting final results. Their admission will only be confirmed once they have submitted their complete official Transcript within the due dates.

## PhD Physics

PhD Physics is a three-year degree program that can be extended further as per policy. The program consists of 2 semesters of coursework of 18 credit hours followed by a minimum of 4 semesters of research of 12 credit hours. In the first year, students have to complete 18 credit hours of coursework, which is followed by a Comprehensive Examination. The student is expected to carry out original research work under the supervision of a faculty member (who is an HEC-approved supervisor) from the Department. The Department of Physics is equipped with many state-of-the-art research facilities.

At FCCU, admission to the PhD program is made in the research areas which are supported through research projects, and in which faculty research groups are currently engaged. Current PhD students are enrolled and working in both theoretical as well as experimental disciplines.

## Admission Criteria

- Minimum CGPA 3.0 (out of 4.0) in the semester system or first division in the annual system in MPhil/MS/equivalent in Physics or Mathematics
- Passing a subject test conducted by the National Testing Service (NTS) or ETS (USA) in the area of specialization chosen at the PhD level
- In the case of GAT subject test, a minimum of 60% marks are required
- In the case of GRE subject test, a minimum of 60% score is required
- Passing an interview conducted by the PhD admission committee
- The candidate will submit a research statement along with the admission application

## NOTE

Acceptance is based upon the 1) GAT/GRE Score, 2) interview and 3) an overall evaluation of the candidate, including: academic achievement, research statement and English language proficiency. Provisional admission can be sought by students awaiting final results. Their admission will only be confirmed once they have submitted their complete official Transcript and GAT/GRE Score within the due dates.

## Salient Features

- Main focus on research in both Theoretical and Experimental Fields
- All instructors have PhD degrees and some have Post-doctoral foreign experience as well
- We conduct international Physics convention every year
- We collaborate with different institutions at national and international level. We have signed an agreement with The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy, where every year two faculty members or two PhD candidates visit to attend conferences and workshops which are entirely funded by ICTP
- We take our students to different conferences

## Research Collaborations

- COMSATS Institute of Information Technology, Lahore
- Government College University (GCU), Lahore
- The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy
- National Centre for Physics (NCP), Islamabad
- National Institute of Lasers and Optonics (NILOP), Islamabad
- University of Engineering and Technology (UET), Lahore
- University of Maryland, USA

## Faculty

### Dr Monas Shahzad

Associate Professor and Chairperson  
PhD (University of Central Florida, USA)

### Dr Sufian Aslam

Professor and Additional Registrar  
PhD (Lomonosov Moscow State University, Russia)

### Dr Pervez Amirali Hoodbhoy

Distinguished Professor and Zahra & ZZ Ahmed  
Endowed Chair  
PhD (Massachusetts Institute of Technology, USA)

### Dr Sadia Zaheer

Associate Professor  
Postdoc (University of Maryland, USA)  
PhD (Government College University, Lahore)

### Dr Hamid Latif

Associate Professor  
Postdoc (University of Maryland, USA)  
PhD (University of Engineering and Technology,  
Lahore)

### Dr Saqlain Abbas Shah

Associate Professor  
Postdoc (University of Washington, USA)  
PhD (Government College University, Lahore)

### Dr Fareeha Hameed

Associate Professor  
PhD (Vienna University of Technology, Austria)

### Dr Khalid Javed

Associate Professor  
PhD (Institute of Physics, Chinese Academy of  
Sciences, China)

### Dr Ammara Shabbir

Assistant Professor  
PhD (University of Engineering and Technology,  
Lahore)

### Dr Laila Zafar Kahlon

Assistant Professor  
PhD (Government College University, Lahore)

### Dr Hafsa Faiz

Assistant Professor  
PhD (University of Engineering and Technology,  
Lahore)

Parents and prospective students are welcome to visit the Admissions Office, Room No 009, Ahmad Saeed Administration Building, Forman Christian College (A Chartered University), Ferozpur Road, Lahore

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