



## Bose Institute, Kolkata Admission to Ph.D. programme



Bose Institute was set up in 1917 by Sir JC Bose, the founder of modern science in the Indian subcontinent. It is Asia's first research centre devoted to interdisciplinary research and bears a century old tradition of excellence in research. The Institute will be functioning imminently from its new unified academic campus in Salt Lake.

Bose Institute has an established Ph.D. programme in chemical, physical, life and interdisciplinary sciences. Many of our alumni have become reputed experts in their fields. The institute is a national pioneer in research on astroparticle physics and cosmic rays, foundations of quantum physics and interdisciplinary physics. Path-breaking research in the fields of plant sciences, structural biology, molecular biology, biomedical sciences and biotechnology has been conducted at the Institute.

The Institute also runs a vibrant Integrated M.Sc - Ph.D. programme, details of which are displayed on the Institute website.

Bose Institute admits students into its Ph.D. programme beginning in the first week of July and January in chemical, physical, life and interdisciplinary sciences. Students can simultaneously apply to more than one stream.

### Tentative timelines for session beginning in:

#### July

**Online application:** March - April  
**Interviews:** April - May  
**Offer of admission:** May - June

#### January

**Online application:** September - October  
**Interviews:** October - November  
**Offer of admission:** November - December

Chemical Sciences	Interdisciplinary Sciences	Life Sciences	Physical Sciences
Carbohydrate chemistry; Glycosyl heterocycles; Medicinal chemistry; Reaction methodology; Synthetic organic chemistry; Synthesis and study of energy storage materials	Air pollution; Big data in geosciences; Biochemistry; Biological database; Biophysics; Cell signaling; Systems biology; Theoretical biology; Computational biology; Computational modelling of chromatin looping in human T and B cells; Networks; CryoEM crystallography; X-ray crystallography; Enzymology; Genomics and proteomics data analysis; Integrated OMICS for defining interactome in health & disease; Machine learning; Game theory; Information theory; Molecular biology; Protein kinase, structure; Precipitation; Polar aerosols; Remote sensing; Statistical physics; Structural biology; Chemical biology; Complex systems	Amyloid protein; Antimicrobial peptide; Apoplasts; Atmospheric Microbiome; Asthma mice model; Bio-aerosols; Biological networks; Cell signaling; Chromatin Biology; Environmental AMR; Environmental Microbiology; Epigenetics; Fungal effector proteins; Genome mining; Halophiles; Host pathogen interaction; In-vitro cell culture asthma model; Lung mitochondria's role in asthma and lung cancer; Lung microbiome role in asthma; Lung cancer and tuberculosis; Microbial systems; Molecular biology and next gen sequencing; NMR; PGPR; Plant Molecular biology; Plant stress response; Plant development; Protein kinase, structure; Structural and Chemical biology; Transcriptome; Systems and synthetic biology	Cloud microphysics; Biophysics, Complex systems and networks; Cosmic rays; Electronic and optical properties of quantum structures; High energy physics; High pressure Raman study; Quantum information; Quantum networks; Nuclear astrophysics; Non-equilibrium processes; Radiative forcing; Remote sensing techniques; Relativistic heavy ion collisions; Statistical physics

### Eligibility criteria

**Candidates should have a valid award of JRF (CSIR-UGC-JRF/ DBT-JRF/ ICMR-JRF/ DST-INSPIRE/ DBT-BINC or equivalent).  
 Master's degree in Engineering/ Science/ Technology in any branch of Science or Engineering.  
 (Students in final year can also apply upon satisfying necessary criteria)**

Website: <http://www.jcbose.ac.in/admissions>

Email: [dean\\_office@jcbose.ac.in](mailto:dean_office@jcbose.ac.in)