

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH BHOPAL
DEPARTMENT OF BIOLOGICAL SCIENCES
ADMISSION TO DOCTORAL (Ph.D.) PROGRAMME

Candidates with a strong aptitude in cutting-edge research and a desire to build their career in science will be admitted to the PhD programme in the following areas of the Department of Biological Science for the year 2011-2012.

1. **Neurobiology:** Cellular and Molecular Mechanisms of Neuronal Function, Development and activity-dependent synaptic plasticity in a Neurogenetic model.
2. **Biochemistry and Structural Biology:** Molecular basis of host-pathogen interaction.
3. **Molecular Microbiology:** Genetics, Molecular Biology and whole proteome analysis of bacteria and bacteriophages.
4. **Environmental Microbiology:** Isolation and characterization of metal tolerant bacteria from soil. Bio-degradation and Bio-remediation.
5. **Molecular Biophysics and Proteomics:** Understanding the structure, function and regulation of membrane proteins under near-native conditions towards drug design.
6. **Molecular Immunology:** To define the mechanism of Host-pathogen interactions.
7. **Chromatin Biology:** Understanding epigenetic regulation of eukaryotic gene expression.
8. **Peptide Chemistry:** Design and study of miniature peptide scaffolds.
9. **Virology:** Understanding the diverse functional roles of virion proteins.
10. **Metagenomics:** Isolation of microbes from environmental samples, metagenomic and genomic sequencing.
11. **Bioinformatics:** Development of computational tools and resources for metagenomic data analysis.
12. **Molecular Chaperones and Stress Biology:** Study of in vivo protein folding in higher plants by utilizing model organisms like yeast

Applicants are advised to visit the website, <http://iiserbhopal.ac.in/Biologicalsciences.htm> to get more information on the faculty profile and the areas of research.

Eligibility: The applicant must have completed or is about to earn a Master's degree in any branch of life science with at least 60% marks and an excellent academic record. SC/ST and physically handicap (PH) candidates must have at least 50% marks at the Master's level. The applicants must also have any one of the following: **1.** A valid CSIR/UGC NET JRF / ICMR – Life Science-JRF / DBT category-A JRF / DST INSPIRE-JRF **2.** Valid GATE score. GATE cut-off will be decided later. GATE qualified candidates without JRF will be provided fellowship from the Institute.

How to apply? The application format can be downloaded from the IISER Bhopal website. The form must be duly filled with all the details and must reach IISER Bhopal by **November 10, 2011**. Applications received after this date will not be entertained. Explicit mention of the research areas must be made. Candidates must also submit, along with the application, one page write-up (~ 500 words) of their research interests which may or may not be from the above mentioned areas. The write-up should also include the name, contact number, address and email of at least two referees who can comment on the scientific abilities of the candidate. These should preferably be the people with whom the candidate has worked in the near past as a project trainee / summer trainee etc.

Age limit: The applicant should not have completed 28 years on December 31st 2011. Age limit will be relaxed by 5 years in the case of SC/ST/PH candidates.

Selection procedure: Shortlisted candidates will be called for a written test followed by two rounds of interview in the month of **Nov/Dec., 2011**. The exact date will be communicated to only shortlisted candidates by email and the same will be posted on the website. Only those candidates who qualify the written test will be asked to appear for interview. An applicant should therefore plan for 2-day stay in Bhopal. TA/DA will be paid to SC/ST candidates. No change in the date or venue of examination / interview will be entertained.