

Integrated MS-PhD in Biotechnology with specialization in Biomedical Genomics

NIBMG has initiated an Integrated MS-PhD program from 2019. Students admitted into the program undergo master's program during the first two years. Apart from coursework, this includes master's projects to be carried out in a research lab(s) under the mentorship of NIBMG faculty, during the third and fourth semesters.

After completion of 4th Semester, students who have qualified a JRF from an external agency can continue in the PhD program either under the same or different mentor. Others, need to appear for a comprehensive exam to evaluate their research aptitude to continue in the PhD programme with NIBMG sponsored fellowship. Based on the recommendations of the evaluation committee, some of the students will be awarded with an MS Degree and will have to exit the program. If recommended for PhD, then the student will continue in the PhD program either with same or a different mentor. After switching over to PhD program, PhD thesis to be submitted, not earlier than 3 years or not later than 5 years. Limited and competitive NIBMG sponsored PhD fellowships are available for those students who do not qualify in national fellowship tests like NET-JRF to support their studies.

Curriculum:

Integrated MS-Ph.D program has a blend of theoretical courses, practical (hands-on) lab courses, and projects in research laboratories. The first semester courses focus on basic biology such as Biochemistry, Cell Biology, Molecular Biology, Immunology, Principles of Genetics etc. The students from non-biology background will be encouraged to take special courses in fundamental of biology and genetics to bridge their knowledge gap if required. Second semester introduces Human Genetics and Genomics, Biostatistics, Data Analysis (in R) and includes courses related with genetic aspects of human diseases such as cancer, infectious and chronic diseases. Along with the lectures and practical, each student undergoes research lab rotation in the major research areas: (Cancer, Infectious disease, Chronic disease and Computational Biology and Statistical Genomics) during first two semesters. The Third semester includes a few courses on Research Methods, Scientific Communication, advanced genomics/ bioinformatics courses in addition to research project under the assigned supervisor. The 4th semester students will only undertake project work, that has been initiated.

Research at NIBMG:

Research activities at NIBMG are centred around the common theme of understanding genomic background of human health and disease. NIBMG is equipped with state-of-the art technologies that include high throughput Next Generation Sequencing (NGS) platforms, Mass-proteomics platform, High-performance computing (HPC) platform connected with Lustre file system , FACS, Confocal Microscopy imaging facility, zebrafish and small animal facilities and others

The broad areas of research pursued at NIBMG are:

1) Biomedical Genomics and the functional implications in the context of:

- A. Cancer
- B. Infectious disease
- C. Chronic disease

2) Computational Biology and Statistical Genomics

Minimum Eligibility:

Indian nationals with minimum 55 % aggregate marks (or an equivalent grade point average) in bachelor's degree in any branch of Biological Sciences are eligible to apply. Students from the SC, ST, OBC (non-creamy layer), and PWD categories shall be given a relaxation of 5% marks. Students in the last year of their bachelor's degree are also eligible to apply, provided they can produce a proof of having secured the minimum aggregate marks at the time of admission. Students need to have taken mathematics as subjects at 10+2 level or higher.

Candidates who fulfil the minimum eligibility conditions and have qualified any of the following entrance exams (in the current year or latest exam held) may apply online.

1) Joint Graduate Entrance Examination for Biology and Interdisciplinary Life Sciences (JGEEBILS conducted by NCBS/TIFR):

2) Joint Admission Test for M.Sc. JAM- in Biotechnology (BT), Mathematical Statistics (MS), or Chemistry (CY) will be eligible.

Selection procedure:

Candidates will be shortlisted for interview if their scores in JGEEBILS or JAM (BT, MS, and CY) are higher than the cut-offs determined by NIBMG. Short listed candidate will be called for interview for final selection

Fellowships:

The students admitted to the program receive a fellowship of Rs. 16,000/- per month for the first 2 years of the program (MS part). Students shall undergo comprehensive evaluation for switching over to PhD program.

Those who qualify the comprehensive test for switching over to the PhD program and have not qualified for any national level fellowship exams (NET JRF) will be provided a fellowship as per GoI norms (Rs. 25,000/- PM and Rs. 28,000 at JRF and SRF levels respectively) for PhD program. During the PhD tenure, those who qualify a National Level Test for PhD, can avail the appropriate fellowship from the UGC/DBT/ICMR or others. Students who qualify CSIR-UGC NET-LS or equivalent will also be awarded regular PhD fellowship (as per DST OM SR/S9/Z-05/2019). Students unable to qualify for switching over to PhD degree, will be eligible for the MS degree only on securing

stipulated CGPA, completion of MS dissertation and satisfying all other Institute requirements as per course guidelines.

Hostel Facilities:

On campus accommodation facility is available for all admitted students on payment of prescribed fees; it is mandatory for all (unmarried) students to stay in the Hostel during the entire course of study. For details regarding the amenities available at NIBMG hostel please visit <https://www.nibmg.ac.in/p/amenities-in-hostel>

Fees*:

Fee	Amount	Payable
Academic Administration Fee	Rs. 5000/-	Each semester (as per norms)
Tuition Fees	Rs. 6000/-	Each semester for the first three semesters (As per norms of the course)
Hostel Fees	Rs. 2500/-	Every month
Medical Fees	Rs. 3000 per year	Paid annually
Laboratory fee	Rs 8000/-	Each semester for first four semesters (As per norms of the course)

* Fees are subject to change from time to time as per subsequent terms and condition.

Contact Details:

Academic Section

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