PhD (Statistics)

This PhD program aims at providing quality opportunities to research in the fascinating area of Statistics. Today there is hardly any field of scientific investigation which does not employ quantification in terms of statistical models. This program will enable candidates to appreciate and make contributions to statistical research especially in financial, econometric, demographic, computational, and business related applications. The candidates are expected to be full time research students and will also have the opportunities to do teaching related activities, for which they will be compensated with a monthly stipend.

Eligibility:

A candidate may embark on his PhD in Mathematical Sciences program at IBA if:

- The applicant has earned an MS (in Mathematics or allied areas) from a foreign / local university of international repute, and in addition to it:

i. Clears IBA's entry test, or scores 650 in GRE Subjective (Mathematics).

ii. Goes through a successful interview at IBA.

Other rules:

(1) A PhD student would be required to teach under-graduate courses as per IBA's policy.
(2) A PhD student shall be paid a stipend as per IBA's policy.
(3) PhD students will be required to do six courses

Courses:

The Departmental Research Committee (DRC) is authorized to introduce any new courses added to the following list as and when required:

Required Courses

Course Title	Course Code	Credit Hours	Pre-Requisite
Linear Statistical Models	STA 601	3	-
Generalized Linear Models	STA 602	3	-
Advanced Probability Theory	STA 603	3	-
Stochastic Processes	STA 604	3	-
Advanced Statistical Inference	STA 605	3	-
Multivariate Statistics	STA 606	3	-
Time Series Analysis and Forecasting	STA 611	3	-
Experimental Design and ANOVA Models	STA 612	3	-
Statistical Machine Learning	STA 621	3	-
Statistical Data Mining and Knowledge Discovery	STA 622	3	-
Classification and Pattern Recognition	STA 631	3	-
Optimization Techniques	STA 632	3	-
Bayesian Statistics	STA 641	3	-
Reliability and Survival Analysis	STA 642	3	-
Non-Parametric and Semi-Parametric Statistics	STA 651	3	-
Simulation and Re-sampling Methods	STA 652	3	-
Advanced Operations Research	STA 661	3	-
Stochastic Financial Models	STA 662	3	-
Financial Time Series	STA 671	3	-
Advanced Econometrics	STA 672	3	-
Econometric Analysis of Time Series	STA 681	3	-
Longitudinal and Panel Data Models	STA 682	3	-
Functional Data Analysis	STA 691	3	-
Functional Time Series Analysis	STA 692	3	-

(chosen from the mentioned table) at 600 levelas suggested by the research supervisor and / or the DRC, spread over two semester. On successful completion of the course work with CGPA of at least 3.0, the candidate qualifies to work on PhD dissertation. Failing to achieve this qualification the candidate would be allowed to improve his / her CGPA by doing two of his courses again. In view of candidate's request and recommendation of DRC the candidate may do any other two courses to improve the CGPA to the required level.

Comprehensive Test:
The DRC will decide a Comprehensive Examination on case to case basis.

Disqualification:
If the candidate fails to qualify for work on PhD dissertation he / she may be awarded an MS degree on the recommendation of the supervisor / DC.

Minimum Time Requirement:
Minimum time required to complete PhD thesis is two years.

Graduation Eligibility
A candidate who accomplishes all the conditions imposed for acquisition of the PhD degree, is also, in addition, required to take the GRE / GAT (subjective) before finally doctoral diploma may be obtained.

Defense of Research Synopsis / Thesis:
The research synopsis would have to be defended against the DRC. Public defense of the PhD thesis and completion of the degree will commence after examination of the thesis by two foreign examiners.