Established in 1959 as one of the first Indian Institutes of Technology, the institute was created with the assistance of a consortium of nine US research universities as part of the Kanpur Indo-American Programme (KIAP).

It was declared to be an institute of national importance by the government of India under the Institutes of Technology act.

The department, since its inception in 1959, has emerged as a national center for excellence in mathematics, statistics and allied areas, in terms of research, teaching and mentoring students.

The aim of the programme is to cultivate a fine mathematical taste, nurture mathematical interests, motivate research in mathematical sciences and train computational scientists who can work on challenging real life problems.

### About The Programme

The 2 year course in Statistics takes admission through Joint Admission Test for MSc (JAM). The JAM exam through which admissions are held for this course is a highly competitive all-India based entrance exam in which the acceptance rate is less than 3%

This program prepares them for a career in different sectors like finance, analytics, banking, insurance, risk management

With a strong focus on innovation, the students are encouraged to perform MSc projects, through which they learn to tackle theoretical as well as industrial and real-life problems

### Rankings

- Ranked 61 in Asia in the World QS rankings, 2019
- Ranked 25 among the BRICS nations in the World QS rankings, 2019
- Ranked in the band 151-200 for the department of Statistics and Operation Research, 2019
- Ranked 6 among all the universities of India by NIRF, 2019
COURSES

STATISTICS
- Regression Analysis
- Time Series Analysis
- Pattern Recognition
- Applied Stochastic Processes
- Statistical Simulations and Data Analysis
- Multivariate Analysis
- Statistical Inference
- Bayesian Analysis
- Sample Survey
- Robust Statistical Methods
- Asymptotic Statistics
- Linear Model and Matrix Theory
- Non-Parametric Statistics
- Non-Linear Regression
- Design of Experiments & ANOVA
- Probability Theory

INTERDISCIPLINARY COURSES
- Introduction to Machine Learning
- Probabilistic Machine Learning
- Bayesian Machine Learning
- Management Decision Analysis
- Project Management
- Advanced Decision Models
- Game Theory
- Introduction to Computing
- Panel Data Analysis
- Mathematical Modelling
- Convex Optimization

ECONOMICS & FINANCE
- Introduction to Economics
- Microeconomics
- Macroeconomics
- Econometrics
- Mathematical Finance
- Financial Engineering

COMPUTER SCIENCES
- Programming in C
- Data Structures and Algorithms
- Data Mining
- Big Data

COMPUTER LANGUAGES
- R
- Python
- Minitab
- C
- C++
- Java
- Matlab
Distinguished Faculty:

The department takes pride in the distinguished faculty that enriches the deep roots of education in the institute. There are a total 45 professors, assistant professors and associate professors whose research interests provide a lot of diversity in pure as well as applied mathematics and statistics.

AMIT MITRA
- Guest Researcher at Uppsala University, Sweden
- Visiting Guest Researcher at Ludwig Maximillians University, Munich
- Past Research Officer, Reserve Bank of India
- Research Areas: Statistical Signal Processing, Data Mining in Finance and Economic Time Series

DEBASIS KUNODU
- Ph.D. Penn State University, USA
- Life Member of Institute of Mathematical Statistics, Indian Science Congress & Indian Society of Statistics and Probability
- Contributing Editor of Current Index in Statistics
- Research Areas: Statistical Signal Processing, Non-Linear Regression, Survival Analysis, Statistical Computing

NEERAJ MISHRA
- Past Assistant Professor of Marquette University, USA
- Recipient of Jack Wolfowitz Award 2003
- Organizing chairman, JAM 2008
- Recipient of C.L. Chandna Award, 2003
- Research Areas: Statistical Inference, Reliability Theory, Ranking and Selection Problems

SHALABH
- Received the Vigyan Ratna Samman from the Council of Science & Technology, Uttar Pradesh in 2018
- Received the Fellowship of IAMMS.
- Life Member of the National Academy of Science, International Indian Statistical Association, Indian Society of Agricultural Statistics
- Mahalanobis Memorial Award by the Indian Econometric Society
- Humboldt Fellowship
- CR Rao National Award for Young Statisticians
- Jan Tinbergen Award
- Indian Science Congress Young Scientists Award
- Research Areas: Linear Regression Models, Econometrics, Measurement Error Models, Missing Data Models, Panel Data Models, Restricted Regression
SHARMISHTHA MITRA
- Research Fellowship, Indian Statistical Institute
- National Board for Higher Mathematics (NBHM) Research Award
- Research Award, Centre for Scientific & Industrial Research (CSIR), Govt of India.
- Research Interest: Order Statistics, Econometrics, Application of AI Techniques

SUBHRA SANKAR DHAR
- CSIR-UGC junior research fellowship (in Mathematical Science) in June and December, 2005.
- Post-doctoral fellowship (in Statistics) at the University of Cambridge, UK
- Visiting assistant professor in Statistics at the Michigan State University, USA
- Research interests: Multivariate quantiles and rank, Data depth, Measure of association and Isotonic regression

SUBHAJIT DUTTA
- Ph.D. ISI Kolkata
- Post Doc KAUST
- Research Interest: Discriminant Analysis, Classification of Sequence Data.

MINERVA MUKHOPADHYAY
- Ph.D. ISI Kolkata
- Postdoctoral Associate at Duke University, NC, USA, Jan, 2017-Nov, 2018.
- Research Interest: Asymptotic Statistics, Bayesian Variable Selection, Nonparametric Inference.

DEBRAJ DAS
- Ph.D. North Carolina State University
**BATCH HIGHLIGHTS**

- The batch strength of the graduating batch of 2020 is 34.
- Many students secure internships in some of the top analytics companies in the country.
- The students are fluent in software such as R, MATLAB, MINITAB, EXCEL and programming languages such as C, C++.
- The students have undertaken compulsory course projects in Regression Analysis, Time Series and Sample Survey as well as elective courses such as Machine Learning, Panel Data Analysis to bridge the gap between theoretical knowledge and practical situations.

**STAMATICS**

STAMATICS is the student club of the department of Mathematics and Statistics. The function of STAMATICS is to organize workshops to teach the applications of latest software, seminars on various aspects of Mathematics and Statistics, occasional subject oriented quiz competitions and departmental cultural evenings. The team of STAMATICS, comprising students from the department, work yearlong to organize seminars and workshops at regular intervals.

**INDIAN ACADEMY FOR MATHEMATICAL MODELLING AND SIMULATION**

It is a registered body headquartered at the Department of Mathematics and Statistics, IIT Kanpur. The academy aims to promote the application of mathematical modelling and simulation in all branches of knowledge. To achieve this objective, the academy organizes conferences, symposia, seminars and training programmes on a regular basis to facilitate dissemination of research conducted in the areas of mathematical modelling and simulation.
PAST INTERNSHIPS

- Goldman Sachs
- BARCLAYS
- accenture
- Ford
- KPIT
- Walmart Labs
- CapitalOne
- EXL
- Tata Consultancy Services
- BNP Paribas
- StatLab
- hannover re
- EarlySalary
- Bosch
- GE
- Government of India
- Ministry of Statistics and Programme Implementation
- SBI
- Reserve Bank of India
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