Eligibility Criteria

Graduates with the following qualifications (with a minimum of 60% of marks or equivalent grade) from UGC Recognized Universities may apply for MSc (Data Science) programme.

- BSc.Statistics/Mathematics/Computer Science
- BE/B.Tech/BCA
- Any other Graduation with a minimum of two years of learning of Mathematics or Statistics
- Programming knowledge is a pre-requisite for admissions to this programme

Selection Criteria

Selection of eligible candidates will be based on merit of rank obtained in the entrance examination and/or personal interview. In the absence of entrance examination/interview, the merit of rank is prepared by using the grade obtained in Mathematics and/or Statistics and/or Computer Science in the qualifying examinations.

Placement Assistance

The department prepares students for a career as data scientists and researchers enabling them to make a mark in the corporate sector as well as academic institutions. Through industry-academia collaborations, the department provides placement assistance to the students on successful completion of the course.

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MANIPAL
ACADEMY *of* HIGHER EDUCATION
(Institution of Eminence Deemed to be University)
INSPIRED BY LIFE

INSTITUTION OF EMINENCE

Department of Data Science
Prasanna School of Public Health

MASTER'S PROGRAMME IN
DATA SCIENCE

Aim of the Programme

The MSc Programme in Data Science offered at the Department of Data Science is a perfect blend of Machine Learning, Big Data Analytics, Statistics and the Biological Sciences. It aims to nurture the students with inter-disciplinary expertise through

- Strong methodological foundations in the decision sciences
- Versatile training in data-centric research
- Competency to work in multiple programming environments (R, STATA, SAS, SPSS, Python, Hadoop, Spark and SQL)

Course Structure

The programme encourages blended learning paradigm with an amalgamation of regular classes, self-directed learning methods, compulsory journal/seminar presentations, case-study based learning through statistical consultancies. The second year is exclusively devoted to strengthening the employability of the student community through internships in either a corporate or academic institution of repute and research work.

- **Duration**: Two-year full-time programme with Modular-based curriculum framework.

Curriculum Overview

- Probability and Probability Distributions
- Computational Mathematics
- Statistical Inference
- Linear Regression Models
- Categorical Data Analysis and Logistic Regression Models
- Non Parametric Methods
- Stochastic Processes
- Design and Analysis of Experiments
- Longitudinal Data Analysis
- Time Series Analysis
- Nonparametric and Nonlinear Regression Models
- Bayesian Statistical Modelling
- Machine Learning Methods
- Deep Learning and Text Mining
- Distributed Algorithms and Optimization
- Data Management and Data Warehousing
- Programming with R and Python
- Programming in SAS for Analytics
- Programming with Hadoop and Spark
- Applied Data Analytics
- Certification in Research Methodology

About us

The Department of Statistics was established as the first teaching department under Manipal Academy of Higher Education on August 01, 2006. With state-of-the-art computational facilities coupled with the expertise of faculties, the Department has always stridden ahead of times. With a keen eye on the developments around the globe, the department has re-defined its identity and is now; the Department of Data Science. The department also runs a consultancy centre to provide statistical consultation to faculty, researchers and postgraduates of medical/ technical institutions as well as the corporate sector.

Programmes Offered

- Master of Science in Data Science programme
- Master of Science in Biostatistics programme
- Master of Science in Digital Epidemiology programme
- Certificate Course in Biostatistics, Epidemiology and Research Methodology
- Doctoral Degree programme
- PhD programme in collaboration with

  a) Novartis Health Care Pvt.Ltd., Hyderabad

  b) GlaxoSmithKline Asia Private Ltd., Bengaluru