Success Stories

Through collaborations with the industry as well as research institutes, the department provides placement assistance to successful students. We are proud of our alumni who have embarked on a career as biostatisticians, data scientists and researchers through campus placements much in line with the belief "World Wide Manipal."

Research Institutions

Academic Institutions

Placements in Industry

Contact us
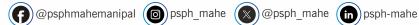
Department of Applied Statistics and Data Science

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

INSTITUTION of EMINENCE

MASTER'S PROGRAMME IN
BIOSTATISTICS

manipal.edu

Department of
Applied Statistics and
Data Science

PRASANNA SCHOOL OF PUBLIC HEALTH
MANIPAL
(A constituent unit of MAHE, Manipal)
INSPIRED BY LIFE

Aim of the Programme

The MSc Programme in Biostatistics offered at the Department of Applied Statistics and Data Science is one-of-a-kind specialized course that nurtures students to pursue a career that encompasses statistics as a decision science along the lines of health and biological sciences. It aims to nurture the students with inter-disciplinary expertise through

- Strong methodological foundations in applied statistics
- Versatile training in data-centric research through statistical consultations
- Competency to work in multiple programming environments (R, Python, SAS, Hadoop, Spark, Power BI, Microsoft Office and SQL)

Teaching Methodology

- Courses are delivered through regular classroom teaching, learning through case studies, seminars, tutorials, self-directed learning, fine-tuning of pedagogic skills, journal presentations and subsequent research orientation
- Practical courses primarily involve problem-oriented learning with exposure to multiple software environments

Eligibility Criteria

Graduates with a minimum of 60% marks or equivalent grade in any of the following qualifications from UGC Recognized Universities/ institutions may apply for MSc (Biostatistics) 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

Note: Students selected for the programme are expected to complete all the requirements of the Bachelor's programme considered for eligibility to MSc (Biostatistics) prior to admission to this programme. Provisional certificates must be submitted at the time of admission to the programme.

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 fourth semester 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 Semester-based curriculum framework.

Curriculum Overview

- Probability and Probability Distributions
- Epidemiology and Clinical Trials
- Computational Mathematics
- Statistical Inference
- Linear Regression Models
- Categorical Data Analysis & Generalized Linear Models
- Stochastic Processes
- Design and Analysis of Experiments
- Event History Analysis
- Hierarchical Models
- Machine Learning Methods
- Data Management and Data Warehousing
- Programming in SAS for Analytics
- Programming with R and Python
- Bayesian Statistical Modelling
- Disease Modelling and Spatial Modelling
- Applied Data Analytics
- Research Methodology

Electives

- Time Series Analysis
- Nonparametric and Nonlinear Regression Models

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 in the qualifying examinations.

Talent Recognition

- GlaxoSmithKline Asia Private Ltd., Bengaluru awards cash prizes for the first two rank holders of the outgoing students of MSc (Biostatistics) programme
- Prof. Abhay Indrayan Award for the best outgoing student of MSc (Biostatistics) programme

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 Applied Statistics and 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 Biostatistics programme
- Master of Science in Data Science programme
- Master of Science in Digital Epidemiology programme
- Certificate Course in Biostatistics, Epidemiology and Research Methodology
- Certificate Course in Qualitative Research Methods
- Doctoral Degree programme
- PhD programme in collaboration with
  a) Novartis Health Care Pvt.Ltd., Hyderabad
  b) GlaxoSmithKline Asia Private Ltd., Bengaluru

Collaborations

- Indian Statistical Institute, New Delhi
- School of Population Health, University of Melbourne, Australia
- Robert Gordon University, Scotland
- Indian Institute of Public Health, Gandhinagar
- Madras Diabetes Research Foundation, Chennai
- Public Health Foundation of India, New Delhi
- University of Groningen, The Netherlands
- Tata Institute of Social Sciences, Mumbai
- TCS Life Sciences, Bengaluru