

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 (Digital Epidemiology) 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 promising career in the domains of health care technology, e-health governance, policy think tanks along with research and academia. Through industry-academia collaborations, the department provides placement assistance to the students on successful completion of the course.

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Department of Data Science Prasanna School of Public Health



MASTER'S PROGRAMME IN DIGITAL EPIDEMIOLOGY

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.

Aim of the Programme

The MSc Programme in Digital Epidemiology offered at the Department of Data Science aims to build competencies in designing efficient and scalable algorithms for processing, mining and analyzing dynamic and large-scale epidemiologic/non-epidemiologic data. The programme aspires to achieve data-driven, evidence-informed policy impacts for the benefit of the global community by nurturing the students with inter-disciplinary expertise through

- Methodological expertise in big data analysis and its applications
- Strong methodological foundations in multi-disciplinary facets of epidemiology
- Data driven evidence based research and development using advanced computational capabilities

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
- Epidemiology
- Computational Mathematics
- Biostatistical Inference
- Linear Regression Models
- Categorical Data Analysis and Logistic Regression Models
- Clinical Trials
- Disease Modelling and Spatial Modelling
- Programming with R and Python
- Data Management and Data Warehousing
- Data Processing Techniques
- Digital Infrastructure
- Digital Innovation Methods
- Digital Monitoring and Evaluation
- Digital Communication
- Digital Legislation and Policy
- Machine Learning Methods
- Deep Learning and Text Mining
- Health Technology Assessment
- Certification in Research Methodology and Health Informatics

Programmes Offered

- Master of Science in Digital Epidemiology programme
- Master of Science in Biostatistics programme
- Master of Science in Data Science 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

