



MSc in Medical Data Science

Postgraduate Scheme in Health Technology

FEATURES

Medical data science is a multidisciplinary field that combines medicine, data science, and computer science to analyze and interpret large amounts of medical data. With the rapid advancement in artificial intelligence, genomics and biomedical fields, personnel with a solid background in medical data analytics are in high demand. The curriculum of the MSc programme in Medical Data Science includes computing, molecular biology, genomics, and bioinformatics, which is designed to equip students with the knowledge and skills to effectively analyze and interpret complex medical data. Students will gain hands-on experience in working with large-scale healthcare datasets and learn how to apply advanced techniques to solve real-world healthcare challenges.

CREDIT REQUIREMENTS

Students will be required to complete a total of 30 credits for the award of MScMDS, including 3 credits of one compulsory subject, 18 credits from core subjects and 9 credits from elective subjects.

Compulsory subject

- Research Methods & Biostatistics

Core Subjects

- Bioinformatics in Health Sciences
- Advanced Molecular Biology and Genetics
- Algorithms in Bioinformatics and Genomics
- Principles of Data Sciences
- Data Structures and Database Systems
- Systems Biology
- Ethical Issues in Medicine and Research

Elective subjects

- Dissertation
- Medical Artificial Intelligence and Data Analytics
- Latest Advances in Computational Biology
- Probability and Stochastic Models
- Machine Learning and Data Analytics
- Artificial Intelligence & Big Data Computing Programming/ Big Data Computing
- Epidemiology
- Molecular Technology in the Clinical Laboratory
- Clinical Applications of Molecular Diagnostics in Healthcare
- Workshops on Advanced Molecular Diagnostic Technology
- Genomic Technology and Functional Genomics
- Advanced Technology and Clinical Application in Computed Tomography/
Advanced Technology and Clinical Application in Magnetic Resonance Imaging
- Molecular and Functional Imaging: From Body System to Molecules/
Digital Imaging and PACs

TUITION FEE

HK\$7,000 per credit for local and non-local students

MODE OF ATTENDANCE

Mixed-mode (full-time or part-time)

NORMAL DURATION

1.5 years for full-time study

3 years for part-time study

ENTRANCE REQUIREMENTS

Bachelor's degree in Bioinformatics, Computer Science, Computer Engineering, Electronic Engineering, Biomedical Engineering, Physics, or Applied Mathematics, natural sciences, life science, biomedical science, biology, biochemistry, biotechnology, medical laboratory science or healthcare-related disciplines from PolyU or a recognised institution.

Other qualifications may be considered on an individual basis.

CONTACT INFORMATION

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