



Deeper Thinking... Fundamentals of Mathematics...

Mathematical Analysis
Algebra & Geometry
Differential Equations
Mathematical Modeling
Stochastic Processes
Probability

Mathematical and
Engineering Knowledge
Analytical Problem Solving
Innovative & Creative Solutions
Communication Skills &
Professional Ethics

...Broader Outcomes...

Networking
Big Data Systems
Multimedia Processing
Communication Systems
Software Engineering
Cyber Security

...Fundamentals of Information Engineering...

Mathematics and Information Engineering

This is an interdisciplinary programme jointly offered by the Faculty of Engineering and the Faculty of Science, with the Department of Information Engineering and the Department of Mathematics being responsible for the management and actual running of it. The programme is designed to equip students with fundamental knowledge in both mathematics and engineering, providing a solid foundation for further studies at the graduate school level or pursuing independent research or careers in various sectors.



Programme Features

Research

Independent Studies

This programme places strong emphasis on research and encourages independent studies under the supervision of professors from either departments. Students who excel in their studies will have opportunities to take up research work during their later years of study. A first-year student in this programme may follow the general Engineering study scheme or the "Enrichment Mathematics" study scheme.

Curriculum

Information Engineering + Mathematics

Wide Range of Electives

Major Requirement including Faculty Package (81 units)

Year	Information Engineering + Mathematics	Wide Range of Electives	
Year 4	Final Year Project I and Final Year Project II <i>plus major electives</i>	Web-scale Information Analytics Programming Big Data Systems Internet of Things Building Scalable Internet-based Services Social Media & Human Info Interaction Image & Video Processing Multimedia Coding and Processing Simulation & Statistical Analysis Intro to Stochastic Processes Digital Communication Applied Cryptography Cyber Security Graph Theory Numerical Analysis Linear Programming Mathematical Modeling Networks: Technology, Economics, & Social Interactions and MORE!	
Year 3	Info & Software Engg Practice Computer Networks Info Infrastructure Design Lab Communications Lab <i>plus Major Elective Courses</i>		Specialized Professional
Year 2	Programming Lab Basic Analog & Digital Circuits Data Structures Signals and Systems <i>plus an Extra Foundation Course & Major Elective Courses</i>		Advanced
Year 1	Engineering Faculty Package or Enrichment Mathematics Study Scheme <i>plus Extra Foundation Courses</i>		Fundamental

Plus University Core Requirement, including English Language, Chinese Language, General Education, Physical Education & IT Training.

Admission

For further details, please refer to the brochure of the **Faculty of Engineering** or the **Faculty of Science**, or visit the websites at <http://www.erg.cuhk.edu.hk> or <http://www.math.cuhk.edu.hk>

Contact Persons / Enquiries

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