Master of Science in
Financial Mathematics and Statistics

理學碩士（金融數學與統計）

1 Year Full-time / 2 Year Part-time
2025 Intake

Programme Code: P68

Introduction

This programme emphasizes the development of students' ability to evaluate and develop financial business and statistical models. It also provides students with the theoretical knowledge necessary for complex financial and insurance operations. Furthermore, the programme enhances their mathematical and computational skills in Financial Mathematics and Risk Management.

Graduates should be able to price various modern financial and insurance products and to assess and manage financial and insurance risks. The programme will significantly enhance the competitiveness of our graduates in the job market. It is expected that students majoring in areas like Financial Engineering, Actuarial Science, Mathematics, Statistics, Physics, Engineering, Computing and Information Technology, as well as professionals from both finance and insurance industries will benefit from this master degree programme.

Unique Features

- The programme aims at producing analytical graduates with business awareness as well as solid background in financial engineering and risk management, and to equip students with relevant theoretical knowledge as well as statistical and computational skills in a global business context.

- Students will conduct research projects with faculty members. Through classroom learning and interaction with their supervisors, students will understand the new cutting-edge techniques and develop their interests in research. Such experience will serve as the foundation for students to pursue a PhD degree.

- Graduates will be equipped with mathematical skills, contemporary finance theory and information technology knowledge, and be ready for a professional career in finance/statistical industries.

Department of Mathematics at City University of Hong Kong

The Department specializes in applied and computational mathematics. It possesses a strong team of faculty members who are experts in a wide range of applied topics. They are active researchers with excellent track records. The Department provides ideal learning environment for students and trains them in practical problem solving.

Programme Structure

Students are required to complete a minimum of 30 credit units*:

Course type	Credit Units
Cores	15
Electives	15 or 16
Total	**30 or 31**

* Each course carries 3 credit units except MA6616 Project (1 credit unit) and MA6617 Dissertation (6 credit units).

Students are required to take the following cores courses and select courses from a pool of elective courses listed below:

Cores:
MA5616	**Financial Mathematics in Derivative Markets**
MA5617	**Statistical Data Analysis**
MA5618	**Stochastic Analysis in Finance**
MA6629	**Advanced Stochastic Analysis in Finance**
MA6633	**Statistical Modelling for Data Mining**

Electives:
MA5601	**Applied Partial Differential Equations**
MA6612	**Numerical Partial Differential Equations**
MA6616	**Project (1 credit unit)**
MA6617	**Dissertation (6 credit units)**
MA6622	**Statistical Methods and Calibration in Finance and Actuarial Science**
MA6627	**Stochastic Interest Rate Models**
MA6628	**Programming and Computing in Financial Engineering**
MA6630	**Introduction to Statistical Learning**
MA6631	**Special Topics**
MA6632	**Statistical Analysis of Financial Big Data**
EF5042	**Corporate Finance (Department of Economics and Finance)**
EF5340	**Credit Risk Management (Department of Economics and Finance)**
BIOS6900	**Time Series Analysis**

* All courses to be offered or not will be subject to host department's final decision and may vary from term to term

Credit Transfer / Exemption

If applicants have completed equivalent courses at a university level, they may be eligible to apply for credit transfer (at a maximum of 9 credit units) or exemption from some programme requirements upon admission to the University. In such cases, the standard application fee will be charged in accordance with the University's policy.

Mode of Study

Courses will be delivered on weekday evenings and Saturdays. Some courses may be taught in intensive mode by visiting experts (i.e. 39 hours to be taught in 7 weeks in Semester A/B or 5 weeks in Summer Term). Since full-time students may also take some courses along with part-time students, they may have to attend classes in the evenings and weekends.

Normative Study Period

– 2-3 semesters (full-time)
– 4-5 semesters (part-time)

Class Starts

September 2025

Entrance Requirements

To be eligible for admission, the applicants must hold a first degree or a postgraduate degree in science and engineering (Mathematics, Physics, Statistics, Computer Science, Engineering, etc.), or in a related discipline (Economics, Finance, and Actuarial Science), or equivalent.

Online Application

http://www.cityu.edu.hk/pg/taught-postgraduate-programmes/apply-now

Fees

Application fee: HK$500
Tuition fee: HK$8,200 per credit unit (subject to yearly review)
Graduation fee: HK$400
Successful applicants will be required to pay a deposit equivalent to 5 credit units.

Application Deadline (tentative)

31 January 2025

Education Loan

Successful applicants may apply for the Government's Non-means-tested Loan Scheme. Application forms are obtainable from each District Office and the Student Financial Assistance Agency. Enquiries: +852 2150-6222
Website: http://www.wfsfaa.gov.hk/sfo/en/index.htm

The Department of Mathematics Scholarships for Outstanding Graduates of MSFMS

A maximum of two scholarships shall be awarded to the top two students of the graduating class of Master of Science in Financial Mathematics and Statistics (MSFMS) who have achieved the best academic performance (in terms of CGPA) while meeting a minimum CGPA threshold.

Enquiries

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