Tuition Fees

The full composition fee for the programme is HK$218,000* for the 2024 intake. The fee shall normally be payable in two instalments over one year for full-time study or in four instalments over two years for part-time study. In addition, students are required to pay Caution Money (HK$350), refundable on graduation subject to no claims being made, and Graduation Fee (HK$350). With effect from 2022-23, all full-time students will be charged a student activity fee of $100 per annum to provide support for activities of student societies and campus wide student events.

Admission Requirements

- Applicants shall hold a Bachelor’s degree, or an equivalent qualification with knowledge of matrices and calculus, introductory statistics and linear modelling
- Applicants shall fulfill the University Entrance Requirements.

Programme Director

Dr Olivia T K Choi
BSc, UGC, MPhil, PhD (JHU)  Department of Statistics & Actuarial Science

STAFF LIST

Professor T J Boonen
BSc, MSc, PhD (Cambridge) Actuarial Science, Capital Allocation, Game Theory, Insurance Economics, Optimal Reinsurance, Longevity Risk Modelling, Risk Sharing

Professor Y Cao
BSc (Tsinghua), PhD (Princeton) Machine Learning Theory; High-dimensional Data Analysis; Optimization

Professor K C Cheung
BSc, MPhil, PhD (Cantab), Homerton College, Oxon Machine Learning; Mathematical Finance; Statistics; Computer Science; Engineering

Professor K C Yuen
BSc (HKUST), PhD (UCLA) Medical Image Analysis; Machine Learning; Computer Vision; Robotics; Neurotechnology

Professor S M S Lee
BSc, MSc, PhD (Columbia) Financial Mathematics; Actuarial Science; Financial Risk Analysis; Enterprise Risk Management

Professor Y Gu
BSc, MSc, PhD (University of Toronto) Non-Life Risk Management; Life Risk Management; Data Analytics; Actuarial Science; Financial Mathematics; Insurance; Risk Management

Professor S Y Fung
BSc, MPhil, PhD (HK) Real Estate Economics, Econometrics, Macroeconomics, Financial Markets, Financial Management, Risk Management

Professor S T C Yip
BSc (HK), MSc, PhD (Hong Kong University); MA (Stanford) Management, Business Analysis, Business Strategy, Business Planning

Professor C W Kwan
BSc, MSc, PhD (McGill) Quantitative Risk Management

Professor C W Kwan
BSc, MSc, PhD (McGill) Quantitative Risk Management

Professor C Y Zhang
BSc, MSc, PhD (Hong Kong University) Time Series Analysis; Econometrics; Causal Inference

Professor J T Boonen
BSc, MSc, PhD (Cambridge) Actuarial Science, Capital Allocation, Game Theory, Insurance Economics, Optimal Reinsurance, Longevity Risk Modelling, Risk Sharing

Professor Y Cao
BSc (Tsinghua), PhD (Princeton) Machine Learning Theory; High-dimensional Data Analysis; Optimization

Professor K C Cheung
BSc, MPhil, PhD (Cantab), Homerton College, Oxon Machine Learning; Mathematical Finance; Statistics; Computer Science; Engineering

Professor K C Yuen
BSc (HKUST), PhD (UCLA) Medical Image Analysis; Machine Learning; Computer Vision; Robotics; Neurotechnology

Professor S M S Lee
BSc, MSc, PhD (Columbia) Financial Mathematics; Actuarial Science; Financial Risk Analysis; Enterprise Risk Management

Professor Y Gu
BSc, MSc, PhD (University of Toronto) Non-Life Risk Management; Life Risk Management; Data Analytics; Actuarial Science; Financial Mathematics; Insurance; Risk Management

Professor S Y Fung
BSc, MPhil, PhD (HK) Real Estate Economics, Econometrics, Macroeconomics, Financial Markets, Financial Management, Risk Management

Professor S T C Yip
BSc (HK), MSc, PhD (Hong Kong University); MA (Stanford) Management, Business Analysis, Business Strategy, Business Planning

Professor C W Kwan
BSc, MSc, PhD (McGill) Quantitative Risk Management

Professor C Y Zhang
BSc, MSc, PhD (Hong Kong University) Time Series Analysis; Econometrics; Causal Inference

Eligibility:

- Applicants shall hold a Bachelor’s degree, or an equivalent qualification with knowledge of matrices and calculus, introductory statistics and linear modelling
- Applicants shall fulfill the University Entrance Requirements.

Department of Statistics & Actuarial Science
Ms Clara Lian
Tel: (852) 3917 6042  Email: smstat@saas.hku.hk

Faculty of Science, The University of Hong Kong
GIF Chong Yue Ming Physics Building, Pokfulam Road, Hong Kong
Tel: (852) 3917 5287  Fax: (852) 2858 4620  Email: scitpg@hku.hk

Online Application

https://admissions.hku.hk/tpg/

Admission Deadline

Main Round: 12:00 noon (GMT +8), November 20, 2023

Clearing Round: 12:00 noon (GMT +8), January 8, 2024

Expected Graduation Time

Full-time (1 year)

Normative Study Period

Students taking Summer Courses

Part-time (2 years)

Part-time (2 years)

Winter (December 2025)

Winter (December 2025)

Summer (July 2026)

Summer (July 2026)

(1 year)

(2 years)

(2 years)

(1 year)

(Master of Statistics; MStat)

Be a knowledgeable statistician in principles and practice

Experience hands-on applications of methodologies with powerful statistical software

Could select electives from the Department’s research postgraduate programme

Join the programme of more than 30 years in curriculum development and delivery

Select a theme of your interest (Risk Management / Data Analytics / Financial Statistics)

Could select electives from the Department’s research postgraduate programme

Join the programme of more than 30 years in curriculum development and delivery

Select a theme of your interest (Risk Management / Data Analytics / Financial Statistics)

Target Students

Those who wish to advance their quantitative and analytical skills to prepare for a data-focused career path, and those who wish to pursue further study in the field of statistics after studying science, social sciences, engineering, medical sciences, information systems, business and finance in their undergraduate studies.
Programme Curriculum

For successful completion of the programme, student is required to complete a total of 60 credits of courses in either full-time study, or part-time study. Students may choose to specify his/her theme of interests (Risk Management / Data Analytics / Financial Statistics) on transcript if requirement is satisfied. Student must obtain a cumulative GPA of at least 2.0 for graduation.

- **Two Compulsory Courses** (12 credits)
  - **STAT7101** Fundamentals of statistical inference (6 credits)
  - **STAT7102** Advanced statistical modelling (6 credits)

  Students with prior background has to take a more advanced course from the same area as replacement: REPLACE... WITH...
  - **STAT6009** Research methods in statistics (6 credits)
  - **STAT7005** Multivariate methods (6 credits)
  - Any other course

- **Risk Management**
  - **STAT6015** Advanced quantitative risk management (6 credits)
  - **STAT6017** Operational risk and insurance analytics (6 credits)
  - **STAT6009** Stoichiometric dependence modelling (6 credits)
  - **STAT6003** Time series forecasting (6 credits)
  - **STAT6007** Statistical methods in economics and finance (6 credits)
  - **STAT6015** Actuarial statistics (6 credits)
  - **STAT6017** Data mining techniques (6 credits)
  - **STAT6008** Blockchain data analytics (3 credits)

- **Data Analytics**
  - **STAT6011** Computational statistics and Bayesian learning (6 credits)
  - **STAT6016** Spatial data analysis (6 credits)
  - **STAT6005** Multivariate methods (6 credits)
  - **STAT6007** Categorical data analysis (3 credits)
  - **STAT6003** Time series forecasting (6 credits)
  - **STAT6016** Biostatistics (6 credits)
  - **STAT6007** Data mining techniques (6 credits)
  - **STAT6019** Marketing analytics (6 credits)
  - **STAT6021** Big data analytics (6 credits)
  - **STAT6032** Structural equation modelling (3 credits)
  - **STAT6006** Statistical methods for network data (3 credits)

- **Financial Statistics**
  - **STAT6013** Financial data analysis (6 credits)
  - **STAT6009** Stoichiometric dependence modelling (6 credits)
  - **STAT6003** Time series forecasting (6 credits)
  - **STAT6007** Statistical methods in economics and finance (6 credits)
  - **STAT6015** Actuarial statistics (6 credits)
  - **STAT6017** Data mining techniques (6 credits)
  - **STAT6020** Quantitative strategies and algorithmic trading (6 credits)
  - **STAT6021** Big data analytics (6 credits)
  - **STAT6030** Monte Carlo Simulation and Finance (3 credits)

Other Elective Courses (18 credits)

- **Other Elective Courses** (18 credits)
  - **STAT6006** Research methods in statistics (6 credits)
  - **STAT6010** Advanced probability (6 credits)
  - **STAT6019** Current topics in statistics (6 credits)
  - **STAT7006** Design and analysis of sample surveys (3 credits)
  - **STAT7006** Programming for data science (6 credits)
  - **STAT8000** Workshop on spreadsheet modelling and database management (3 credits)
  - **STAT8000** Career development and communication workshop (Non-credit bearing)
  - **STAT6017** Data mining techniques (6 credits)
  - **STAT8088** Statistical practicum (6 credits)
  - **STAT8089** Capstone project (6 credits)

Total: 60 credits

**Programme Duration and Class Schedules**

The programme extends over not less than one academic year for the full-time study, and not less than two academic years for the part-time study. Teaching takes place mostly in day-time from Monday to Saturday for courses having course codes STAT3XXX and on weekday evenings, and Saturday mornings and afternoons for courses having course codes STAT4XXX or STAT6XXX. All lectures are conducted in English at HKU.

- **Full-time (1 year)**
- **Part-time (2 years)**

**Optional Preparatory Courses**

- **Preparatory course in matrices and calculus for students who need to rejuvenate their mathematical skills (August, 2024)**
- **Preparatory course in Python provides a quick overview of the Python programming language (August, 2024)**
- **Review course on basic probability and statistics concepts to solidify students’ conceptual understanding (August, 2024)**
- **Workshop in R covering data handling, graphics, mathematical functions and some basic statistical techniques (August, 2024)**
- **Workshop in SAS for students who need to rejuvenate their skills in data management using SAS (August, 2024)**

**Graduates’ Career Prospects in Recent Years**

**Entrance Scholarship for Master of Statistics**

Entrance scholarship for Master of Statistics of HK$20,000 will be awarded annually to new MStat students on the basis of academic merit and financial need upon admission.

**Master of Statistics Outstanding Performance Scholarship**

One scholarship of HK$50,000 will be awarded annually to MStat student on the basis of academic merit and quality of coursework.

**Lifelong Learning Prizes in Statistics**

Multiple Lifelong Learning Prizes in Statistics, each from HK$5,000 to HK$10,000, will be awarded to MStat students on the basis of academic achievement.

**Belts and Road Scholarship in Statistics and Data Science (Taught Postgraduate)**

This scholarship is awarded annually to outstanding new students from participating Belt and Road countries. Composition fees of MStat could be waived for awardees, and additional allowance of HK$15,000 will be provided to support their studies.

**Targeted Taught Postgraduate Programmes Fellowships Scheme**

The Master of Statistics programme is one of the eligible programmes under the University Grants Committee for Targeted Taught Postgraduate Programmes Fellowships Scheme. Each local applicant who is selected for the fellowships scheme will be awarded an allowance of HK$120,000.

**Reimbursable Course(s) by Continuing Education Fund (CEF)**

The following courses have been included in the list of reimbursable courses under the CEF:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT6013</td>
<td>Financial Data Analysis</td>
</tr>
<tr>
<td>STAT7008</td>
<td>Programming for Data Science</td>
</tr>
<tr>
<td>STAT8003</td>
<td>Time Series Forecasting</td>
</tr>
<tr>
<td>STAT8007</td>
<td>Statistical methods in economics and finance</td>
</tr>
<tr>
<td>STAT8017</td>
<td>Data mining techniques</td>
</tr>
<tr>
<td>STAT8019</td>
<td>Marketing analytics</td>
</tr>
<tr>
<td>STAT6009</td>
<td>Categorical data analysis</td>
</tr>
<tr>
<td>STAT6010</td>
<td>Advanced probability</td>
</tr>
<tr>
<td>STAT6019</td>
<td>Current topics in statistics</td>
</tr>
<tr>
<td>STAT7006</td>
<td>Design and analysis of sample surveys</td>
</tr>
<tr>
<td>STAT8000</td>
<td>Workshop on spreadsheet modelling and database management</td>
</tr>
<tr>
<td>STAT8000</td>
<td>Career development and communication workshop</td>
</tr>
<tr>
<td>STAT6017</td>
<td>Data mining techniques</td>
</tr>
<tr>
<td>STAT6021</td>
<td>Big data analytics</td>
</tr>
<tr>
<td>STAT6030</td>
<td>Monte Carlo Simulation and Finance</td>
</tr>
<tr>
<td>STAT8088</td>
<td>Statistical practicum</td>
</tr>
<tr>
<td>STAT8089</td>
<td>Capstone project</td>
</tr>
</tbody>
</table>

© 2023 The University of Hong Kong