Master of Statistics

Apply now for entry in September 2015
The degree of Master of Statistics is a one year full-time / two years part-time programme, which has been restructured from the previous degree of Master of Social Sciences in Applied Statistics that was launched in September 1987. Since the first graduation in 1989, we expect to have about 700 graduates when the present cohort completes the programme.

This programme is designed to provide a rigorous training in the principles and the practice of statistics. It emphasizes in applications and aims to prepare candidates for further study, research, consulting work and administration in various fields through computer-aided and hands-on experience.

**Highlights**
- Be a knowledgeable statistician in principles and practice
- Experience hands-on applications of methodologies with powerful commercial software
- Could select up to nine electives from the Department’s research postgraduate courses
- Join the programme of over 25 years in curriculum development and delivery
- Select a theme of your interest (Risk Management theme / Data Analytics theme)

**Lifelong Learning Prizes in Statistics**
There are Lifelong Learning Prizes in Statistics, each from $5,000 to $10,000, for students in this programme based on their first-year examination results.

**Outstanding Performance Award**
One Prize of HKD $50,000 shall be awarded to the MStat student who obtain the first in ranking of the overall examination results.

*Subject to University’s approval*

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**Reimbursable Courses by Continuing Education Fund (CEF)**

Five courses in the programme:
- STAT7006 Survey research methods
- STAT8007 Statistical methods in economics and finance
- STAT8014 Risk management and Basel accords
- STAT8015 Actuarial statistics
- STAT8017 Data mining techniques

are reimbursable courses for the purposes of CEF. All CEF applicants are required to attend at least 70% of the courses before they are eligible for fee reimbursement under the CEF.

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“I keep saying that the sexy job in the next 10 years will be statisticians.”


“...it(Big Data R&D Initiative) will develop and evaluate new algorithms, statistical methods, technologies, and tools for improved data collection and management, data analytics, and e-science collaboration environments.”

Extracted from Big Data solicitation released by NSF of the US.
Programme Curriculum

Commencing in September, the curriculum is composed of a total of 54 credits of courses in either one year for full-time study, or two years for part-time study. The programme offers great flexibilities for students who wish to take a general approach or a specialised theme in Risk Management or Data Analytics. A student may choose to have his/her theme printed on the transcript if he/she has satisfied the requirement of one of the themes. If a student selects an MStat course whose contents are similar to a course (or courses) which he/she has taken in his/her previous study, the Department may not approve the selection in question.

Curriculum for Full-time study

**Two compulsory courses (12 credits)**

- STAT6008  Statistical inference
- STAT6009  Research methods in statistics
- STAT6014  Advanced statistical modelling

plus at least 24 credits of courses from one of the themes below:

**Risk Management theme**

at least 24 credits from

- STAT6006  Stochastic calculus with financial applications (6 credits)
- STAT6013  Financial data analysis (6 credits)
- STST6015  Advanced quantitative risk management and finance (6 credits)
- STAT8003  Time series forecasting (6 credits)
- STAT8007  Statistical methods in economics and finance (6 credits)
- STAT8014  Risk management and Basel accords (6 credits)
- STAT8015  Actuarial statistics (6 credits)
- STAT8017  Data mining techniques (6 credits)
- STAT8301  Big data analytics (3 credits)
- STAT8303  Quantitative strategies and algorithmic trading (3 credits)

*The remaining courses can be selected from other MStat courses*

**Data Analytics theme**

at least 24 credits from

- STAT6011  Computational statistics (6 credits)
- STAT6014  Advanced statistical modelling (for part-time study only) (6 credits)
- STAT6016  Spatial data analysis (6 credits)
- STAT7005  Multivariate methods (6 credits)
- STAT7007  Categorical data analysis (6 credits)
- STAT8003  Time series forecasting (6 credits)
- STAT8016  Biostatistics (6 credits)
- STAT8017  Data Mining techniques (6 credits)
- STAT8019  Marketing analytics (6 credits)
- STAT8301  Big data analytics (3 credits)
- STAT8302  Structural equation modelling (3 credits)

*The remaining courses can be selected from other MStat courses*

Curriculum for Part-time study

**Two compulsory courses (12 credits)**

- STAT7003  Foundations of statistics
- STAT7004  Linear modelling

Whenever feasible, candidates may choose not to follow any theme and may take 42 credits of elective courses in any order.
Description of Courses

STAT6006 Stochastic calculus with financial applications (6 credits)
This course is an advanced course on the option pricing theory. The course covers Black-Scholes equation and stochastic calculus, and interest models. Contents include: Brownian motion, introduction to stochastic calculus; arithmetic and geometric Brownian motion, Ito formula; Sharpe ratio and risk premium; Black-Scholes equation; risk-neutral stock-price process and option pricing; option's elasticity and volatility; Vasicek, Cox-Ingersoll-Ross, and Black-Derman-Toy models; delta-hedging for bonds and the Sharpe-ratio equality constraint; Black's model; options on zero-coupon bonds; interest-rate caps and caplets.
Assessment: One 3-hour written examination; 25% coursework and 75% examination

STAT6008 Statistical inference (6 credits)
This course covers the advanced theory of point estimation, interval estimation and hypothesis testing. Using a mathematically-oriented approach, the course provides a solid and rigorous treatment of inferential problems, statistical methodologies and the underlying concepts and theory. It is suitable in particular for students intending to further their studies or to develop a career in statistical research. Contents include: (1) Paradigms of inference: frequentist, Bayesian, Fisherian; (2) Decision theory: loss function; risk; decision rule; admissibility; minimaxity; unbiasedness; Bayes' rule; (3) Estimation theory: exponential families; likelihood; sufficiency; minimal sufficiency; ancillarity; completeness; UMVU estimators; information inequality; large-sample theory of maximum likelihood estimation; (4) Hypothesis testing: uniformly most powerful test; monotone likelihood ratio; unbiasedness; UMP unbiased test; of maximum likelihood estimation; (5) Hypothesis testing: uniformly most powerful test; monotone likelihood ratio; unbiasedness; UMP unbiased test; of maximum likelihood estimation; (6) Robust methods: measures of robustness; kernel methods; (7) Computationally-intensive methods: cross- and rank tests; Kolmogorov-Smirnov test; nonparametric regression; density ratio statistics; empirical likelihood; (8) Estimation theory: maximum likelihood estimation; (9) Estimation theory: maximum likelihood estimation; (10) Estimation theory: maximum likelihood estimation.
Assessment: One 2-hour written examination; 25% coursework and 75% examination

STAT6009 Research methods in statistics (6 credits)
This course introduces modern methods for constructing and evaluating statistical models and their implementation using popular computing software, such as SAS or R. It will cover both the underlying principles of each modelling approach and the statistical properties of the model estimation procedures. Contents include: recent advances in modern computationally-intensive methods in statistics. It emphasizes the role of computation as a fundamental tool of discovery in data analysis, and for development of statistical theory and methods. Contents include: Generation of random variables including the inversion method, the grid method, the sampling/importance resampling method, the stochastic representation method, and the conditional sampling method; Optimization techniques including Newton's method, expectation-maximization (EM) algorithm and its variants, and minimization-maximization (MM) algorithms; Integration including Laplace approximations, Riemannian simulation, the importance sampling method and variance reduction techniques; Markov chain Monte Carlo methods including data augmentation algorithm, Gibbs sampler, and the exact inverse Bayes formulae sampling; Bootstrap methods.
Assessment: One 2-hour written examination; 50% coursework and 50% examination

STAT6010 Advanced probability (6 credits)
This course provides an introduction to measure theory and probability. The course will focus on some basic concepts in theoretical probability which are important for students to do research in actuarial science, probability and statistics. Contents include: sigma-algebra, measurable space, measure and probability, measure space and probability space, measurable functions, random variables, integration theory, characteristic functions, convergence of random variables, Hilbert spaces, conditional expectations, martingales.
Assessment: One 2-hour written examination; 50% coursework and 50% examination

STAT6011 Computational statistics (6 credits)
This course aims to give postgraduate students in statistics a background in modern computationally-intensive methods in statistics. It emphasizes the role of computation as a fundamental tool of discovery in data analysis, and for development of statistical theory and methods. Contents include: (1) Paradigms of inference: frequentist, Bayesian, Fisherian; (2) Decision theory: loss function; risk; decision rule; admissibility; minimaxity; unbiasedness; Bayes' rule; (3) Estimation theory: exponential families; likelihood; sufficiency; minimal sufficiency; ancillarity; completeness; UMVU estimators; information inequality; large-sample theory of maximum likelihood estimation; (4) Hypothesis testing: uniformly most powerful test; monotone likelihood ratio; unbiasedness; UMP unbiased test; of maximum likelihood estimation; (5) Hypothesis testing: uniformly most powerful test; monotone likelihood ratio; unbiasedness; UMP unbiased test; of maximum likelihood estimation; (6) Robust methods: measures of robustness; kernel methods; (7) Computationally-intensive methods: cross- and rank tests; Kolmogorov-Smirnov test; nonparametric regression; density ratio statistics; empirical likelihood; (8) Estimation theory: maximum likelihood estimation; (9) Estimation theory: maximum likelihood estimation; (10) Estimation theory: maximum likelihood estimation.
Assessment: One 2-hour written examination; 50% coursework and 50% examination

STAT6013 Financial data analysis (6 credits)
This course aims at introducing statistical methodologies in analyzing financial data. Financial applications and statistical methodologies are intertwined in all lectures. Contents include: recent advances in modern portfolio theory, market microstructure and high frequency data analysis.
Assessment: One 2-hour written examination; 40% coursework and 60% examination

STAT6014 Advanced statistical modelling (6 credits)
This course introduces modern methods for constructing and evaluating statistical models and their implementation using popular computing software, such as SAS or R. It will cover both the underlying principles of each modelling approach and the statistical properties of the model estimation procedures. Topics from: (i) Generalized linear models; (ii) Random effects and mixed models; (iii) Nonparametric and semi-parametric methods: kernel and local polynomial regression, selection of smoothing parameters; (iv) Additive models; (v) General issues of model selection: AIC, BIC and Cross-validation.
Assessment: One 2-hour written examination; 50% coursework and 50% examination
STAT6015 Advanced quantitative risk management and finance (6 credits)
This course covers statistical methods and models of importance to risk management and finance and links finance theory to market practice via statistical modelling and decision making. Emphases will be put on empirical analyses to address the discrepancy between finance theory and market data. Contents include: Basic Monte Carlo and Quasi-Monte Carlo Methods; Variance Reduction Techniques; Simulating the value of options and the value-at-risk for risk management; Review of univariate volatility models; multivariate volatility models; Value-at-risk and expected shortfall; estimation, back-testing and stress testing; Copula; Extreme value theory for risk management.
Assessment: One 2-hour written examination; 25% coursework and 75% examination

STAT6016 Spatial data analysis (6 credits)
This course covers statistical concepts and tools involved in modelling data which are correlated in space. Applications can be found in many fields including epidemiology and public health, environmental sciences and ecology, economics and others. Covered topics include: (1) Outline of three types of spatial data: point-level (geostatistical), areal lattice, and spatial point process. (2) Model-based geostatistics: covariance functions and the variogram; spatial trends and directional effects; intrinsic models; estimation by curve fitting or by maximum likelihood; spatial prediction by least squares, by simple and ordinary kriging, by trans-Gaussian kriging. (3) Areal data models: introduction to Markov random fields; conditional, intrinsic, and simultaneous autoregressive (CAR, IAR, and SARI) models. (4) Hierarchical modelling for univariate spatial response data, including Bayesian kriging and lattice modelling. (5) Introduction to simple spatial point processes and spatio-temporal models. Real data analysis examples will be provided with dedicated R packages such as geoR.
Assessment: One 2-hour written examination; 50% coursework and 50% examination

STAT7003 Foundations of statistics (6 credits)
Motivated by real problems involving uncertainty and variability, this course introduces the basic concepts and principles of statistical inference and decision-making. Ideas developed will include probability modelling, statistical distributions; parametric classes; the likelihood principle; maximum likelihood estimation; likelihood ratio tests; hypotheses testing. (Only under exceptional academic circumstances can this compulsory course be replaced by an elective course.)
Assessment: One 3-hour written examination; 25% coursework and 75% examination

STAT7004 Linear modelling (6 credits)
Much of the analysis of variability is concerned with locating the sources of the variability, and many current statistical techniques investigate these sources through the use of ‘linear’ models. This course presents a unified theory of such statistical problems including regression, variance and covariance analyses, design of experiments; and their practical implementation with statistical packages. (Only under exceptional academic circumstances can this compulsory course be replaced by an elective course.)
Assessment: One 3-hour written examination; 25% coursework and 75% examination

STAT7005 Multivariate methods (6 credits)
In many disciplines the basic data on an experimental unit consist of a vector of possibly correlated measurements. Examples include the chemical composition of a rock; the results of clinical observations and tests on a patient; the household expenditures on different commodities. Through the challenge of problems in a number of fields of application, this course considers appropriate statistical models for explaining the patterns of variability of such multivariate data. Topics include: multiple, partial and canonical correlation; multivariate regression; tests on means for one-sample and two-sample problems; profile analysis; test for covariances structure; multivariate ANOVA, principal components analysis; factor analysis; discriminant analysis and classification.
Assessment: One 3-hour written examination; 40% coursework and 60% examination

STAT7006 Survey research methods (6 credits) (CEF code 21Z02633-A)
Inferring the characteristics of a population from those observed in a selection or sample from that population is a situation often forced on us for economic, ethical or technological reasons. Against the background of practical situations, this course considers the basic principles, practice and design of sampling techniques to produce objective answers free from bias. Emphasis will be on current and local problems.
Assessment: One 3-hour written examination; 25% coursework and 75% examination

STAT7007 Categorical data analysis (6 credits)
Many social and medical studies, especially those involving questionnaires, contain large amounts of categorical data. Examples of categorical data include presence or absence of disease (yes / no), mode of transportation (bus, taxi, railway), attitude toward an issue (strongly disagree, disagree, agree, strongly agree). This course focuses on analyzing categorical response data with emphasis on hands-on training of analyzing real data using statistical software such as SAS. Consulting experience may be presented in the form of case studies. Topics include: classical treatments of 2 and 3-way contingency tables, measures of association and nonparametric methods; generalized linear models, logistic regression for binary, multinomial and ordinal data, loglinear models, Poisson regression; Modelling repeated measurements; generalized estimating equations.
Assessment: One 3-hour written examination; 50% coursework and 50% examination

STAT8000 Workshop on spreadsheet modelling and database management (6 credits)
This course aims to enhance students’ IT knowledge and skills which are not covered in the current curriculum but are essential for career development of statistical and risk analysts. The course contains a series of computer hands-on workshops on Excel VBA programming, MS-Access and SQL and C++ basics.
Assessment: 100% coursework, assessment of this course is on a pass or fail basis

STAT8002 Project (6 credits)
A project in any branch of statistics or probability will be chosen, through consultation between students and lecturers. A substantial written report is required. This must be submitted by April 30 of the academic year. A detailed proposal will be required, which should not be overlapped with the other courses. Availability of this course is subject to approval.
Assessment: 75% written report and 25% oral presentation

STAT8003 Time series forecasting (6 credits)
A time series consists of a set of observations on a random variable taken over time. Such series arise naturally in climatology, economics, finance, environmental research and many other disciplines. In addition to statistical modelling, the course deals with the prediction of future behaviour of these time series. This course distinguishes different types of time series, investigates various representations for them and studies the relative merits of different forecasting procedures.
Assessment: One 3-hour written examination; 40% coursework and 60% examination

STAT8007 Statistical methods in economics and finance (6 credits) (CEF code 232080313)
This course provides a comprehensive introduction to state-of-the-art statistical techniques in economics and finance, with emphasis on their applications to time series and panel data sets in economics and finance. Topics include: regression with autocorrelated errors, modelling returns and volatility; instrumental variables and two stage least squares; panel time series models; unit root tests, co-integration, error correction models.
Assessment: One 3-hour written examination; 25% coursework and 75% examination
STAT9014 Risk management and Basel accords (6 credits)  
(CEF code: 23202504-5)  
Being an important financial centre, Hong Kong has always been on the alert for risk in the banking and financial industry. We have weathered many attacks and crises over the past decades. Following the deep and long lasting global financial crisis started in 2007/08, this risk has been the primary focus of most people. This course will provide, and it is paramount for people in or related to the industry to be fully aware of the relevant risk management, including the nature, the culture, the framework, the cycle, the measurement (with focus on market, credit and operational risks) and the mitigation techniques, along with the knowledge of the Basel Accords and practical critical issues.  
Assessment: One 3-hour written examination; 40% coursework and 60% examination

STAT8015 Actuarial statistics (6 credits)  
(CEF code: 23202505-3)  
The main focus of this module will be on financial mathematics of compound interest with an introduction to life contingencies and statistical theory of risk. Topics include simple and compound interest, annuities certain, yield rates, survival models and life tables, population studies, life annuities, assurances and premiums, reserves, joint life and last survivor statuses, multiple decrement tables, expenses, individual and collective risk theory.  
Assessment: One 3-hour written examination; 25% coursework and 75% examination

STAT8016 Biostatistics (6 credits)  
Statistical methodologies and applications in fields of medicine, clinical research, epidemiology, biology, and biomedical research are considered. The types of statistical problems encountered will be motivated by experimental data sets. Important topics include design and analysis of randomized clinical trials, group sequential designs and crossover trials; survival studies; diagnosis; statistical analysis of the medical process.  
Assessment: One 3-hour written examination; 25% coursework and 75% examination

STAT8017 Data mining techniques (6 credits)  
(CEF code: 21208237)  
With the rapid developments in computer and data storage technologies, the fundamental paradigms of classical data analysis are mature for change. Data mining techniques aim at helping people to work smarter by revealing underlying structure and relationships in large amounts of data. This course takes a practical approach to introduce the new generation of statistical data mining techniques and show how to use them to make better decisions. Topics include data preparation, association rules, trees and rules for classification and regression, cluster analysis, classical statistical models and non-linear models such as neural networks.  
Assessment: 100% coursework

STAT8019 Marketing analytics (6 credits)  
This course aims to introduce various statistical models and methodology use in marketing research. Special emphasis will be put on marketing analytics and statistical techniques for marketing decision making including market segmentation, market response models, consumer preference analysis and conjoint analysis. Contents include market response models, statistical methods for segmentation, targeting and positioning, statistical methods for new product design.  
Assessment: One 3-hour written examination; 40% coursework and 60% examination

STAT8088 Practicum (6 credits)  
This course is designed for full-time students of Master of Statistics Programme. It provides students with first-hand experience in the applications of academic knowledge in a real-life work environment. To be eligible, students should be undertaking a statistics-related or risk-management-related practicum with no less than 160 hours in at least 20 working days spent in a paid or unpaid position.  
Assessment: Upon completion of the practicum, each student is required to submit a written report and to give an oral presentation on his/her practicum experience. Supervisors will assess the students based on their performance during the practicum period. Assessment of this course is on a Pass or Fail basis with 3 criteria: (1) supervisor’s evaluation, (2) written report, (3) oral presentation. Please note that fail in fulfilling any of the 3 criteria satisfactorily would lead to a “Fail” grade in the course.

Summer Courses:

STAT8301 Big data analytics (3 credits)  
The recent explosion of social media and the computerization of every aspect of life resulted in the creation of volumes of mostly unstructured data (big data): web logs, e-mails, Tweets, and others. This course aims to provide students with knowledge and skills of some advanced analytics and statistical modelling for solving big data problems. Topics may be selected from the following areas: data visualization, web analytics, text analytics, sentiment analytics, link analysis, social network analysis, recommendation systems, and parallel computing for big data analytics.  
Pre-requisites: Pass in STAT8017 Data mining techniques or equivalent  
Assessment: One 1.5-hour written examination; 50% coursework and 50% examination

STAT8302 Structural equation modelling (3 credits)  
Structural Equation Modelling (SEM) is a general statistical modelling technique to establish relationships among variables. A key feature of SEM is that observed variables are understood to represent a small number of "latent constructs" that cannot be directly measured, only inferred from the observed measured variables. This course covers the theories of structural equation models and their applications. Topics may include path models, confirmatory factor analysis, structural equation models with latent variables, Sub-models including multiple group analysis, MIMIC model, second order factor analysis, two-wave model, and simplex model, model fitness, model identification, and Comparison with competing models.  
Pre-requisites: Pass in STAT7005 Multivariate methods or equivalent  
Assessment: One 1.5-hour written examination; 25% coursework and 75% examination

STAT8303 Quantitative strategies and algorithmic trading (3 credits)  
Quantitative trading consists of investment techniques which make use of statistical models and computer algorithms to identify trading opportunities. This course aims to introduce relevant methods and models that may lead to promising quantitative trading strategies. Topics may include the efficient market hypothesis, mean-reverting vs momentum strategies, back-testing and performance evaluation, money and risk management, statistical arbitrage and pairs trading, high frequency trading, VWAP and optimal trading strategies. Students are required to work on a class project to gain hands-on trading experience.  
Pre-requisites: Pass in STAT8013 Financial data analysis or equivalent  
Assessment: One 1-hour written examination; 60% coursework and 40% examination

Optional Summer Courses

- A 12 hours preparatory course in matrices and calculus for part-time students who need to rejuvenate their skills (August, 2015).
- A 6 hours tutorial in SPSS for all the students who need to rejuvenate their skills in data management using SPSS (August, 2015).
- A 6 hours tutorial in SAS for all the students who need to rejuvenate their skills in data management using SAS (August, 2015).
- A 6 hours introductory course to the use of the language R for data analysis and graphics. This beginners’ course covers data handling, graphics, mathematical functions and some basic statistical techniques (August, 2015).

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 will take place mostly in day-time from Monday to Saturday for courses having course codes STAT6XXX, and on weekday evenings (7:00 – 10:00 p.m.), and Saturday mornings (9:30 a.m. – 12:30 p.m.) and afternoons (2:00 – 5:00 p.m.) for courses having course codes STAT7XXX or STAT8XXX. All lectures are conducted in English at HKU.
The programme is for individuals who wish to acquire the knowledge, practical skills and professional views in statistics. Although most students come from a wide range of disciplines, those who have no former training in statistics should have considerable working experience.

The MStat programme gave me great experience in digging deeper in Statistics after undergraduate study. It enhanced my understanding in the theoretical knowledge as well as real-life application of these knowledge, which is essential in developing my career in Statistics. As the age of big data is coming, solid understanding in Statistics and technical skills such as R and SAS are two key to success, and they can both be well-obtained from MStat programme. Taking every challenge in courses and grabbing various opportunities, a promising future is waiting after this valuable programme.

DING Yanzhe, Denise (MStat Full-time Graduate 2014)
Staff Accountant, Fraud Investigation & Dispute Services
Ernst & Young Advisory Services Limited

As we have entered into the information age, the need for extracting valuable information from huge amount of data is tremendous and statistics provides us an extremely powerful tool to analyze the ever-growing data. This full time MStat program provides me a golden opportunity to learn advanced theory and methodology of statistics and command essential data analytical skills. In addition, the well-designed courses help me see the amazing combination of financial data and statistical techniques, through which I have gained in-depth understanding of the financial market and risk management. Throughout this program, I have developed the professional advantages as a statistics student, which lies in the profound comprehension of data, in the scientific selection of statistics models, in the rational explanation of results and the ability to transform them into luminous conclusions. This is an intensive year, but also an interesting year and productive year.

YANG Chenglong (MStat Full-time Graduate 2014)
Fraud Risk Analytics and Intelligence Manager, Department of Fraud Management, HSBC

Statistics is not merely about numbers. It is a way of thinking which helps to link things in the world up scientifically. The MStat programme in HKU definitely provided a great journey to me in this aspect over the past years. It equips every candidate with advanced knowledge in data management and practical skills in statistics to fit the business world nowadays. In particular, it sharpened my quantitative analytical skills in the area of risk and finance as well as knowledge in latest banking regulations. As a professional in accounting and finance, I find my study in the MStat programme very useful to my work dealing with tremendous amount of data generated every single day. The knowledge I gained also helps me to build financial models with a more logical way.

YUEN Yiu Po, Alfred (MStat Part-time Graduate 2014)
Assistant Manager, Financial Analysis, Pacific Regional Office, The Bank of Nova Scotia

I had a great experience from the MStat programme. It transformed me from a geography graduate to a professional in the field of applied statistics. From a wide range of courses they offered, I could select what I would like to specialize in. The professors and teaching assistants were very qualified, friendly and enthusiastic. Course works, although you may find some challenges in, gave me plenty of insights into real-life problems. My SAS programming skills were also improved a lot. This first-class postgraduate programme not only helps my career development, but also gives me wisdom and broadens my horizons in statistics.

ZHANG Chi (MStat Full-time Graduate 2013)
PhD Student, Department of Statistics and Actuarial Science, HKU

I have spent most of my professional career in Finance. After 2 years in quantitative research, and over 15 years spent in derivatives trading, I am now in charge of risk management at Samena Capital, a principal investment group. I have built significant practical financial market experience, but quantitative risk management as a discipline has seen tremendous developments in the past ten years, in part because of the exponential growth in market data availability and progress in computer science/quantitative analysis of large sets of data. To complement and strengthen my technical skill-set, I decided to enroll into HKU master of statistics program. This experience has been beyond my expectations in terms of relevance to my work as well as personal interest. The program has provided me with a clear theoretical background on recent academic work, as well as a useful update on data analysis software with a number of practice oriented works. We have now implemented a number of these tools and techniques in our daily routine work. It is fair to say that this adds significant value to our investment process. I very warmly recommend HKU MStat program to prospective students, who determine to pursue various research challenges, but also developed my confidence from our research. Comparing with one year ago, I not only learned to cope with various research challenges, but also developed my confidence from our well designed curriculum. I really appreciate the broad platform provided by the MStat program for prospective students, who determine to pursue further study or career development. I do think all I learned from our rigorous training will no doubt add depth and dimension to my research exploration. Definitely, I am proud to be a member of MStat family.

CHAN, Ying Kit, Gordon (MStat Part-time Graduate 2013)
Statistical Officer I, Statistics & Workforce Planning Department, Strategy & Planning Division, Hospital Authority

I have spent most of my professional career in Finance. After 2 years in quantitative research, and over 15 years spent in derivatives trading, I am now in charge of risk management at Samena Capital, a principal investment group. I have built significant practical financial market experience, but quantitative risk management as a discipline has seen tremendous developments in the past ten years, in part because of the exponential growth in market data availability and progress in computer science/quantitative analysis of large sets of data. To complement and strengthen my technical skill-set, I decided to enroll into HKU master of statistics program. This experience has been way beyond my expectations in terms of relevance to my work as well as personal interest. The program has provided me with a clear theoretical background on recent academic work, as well as a useful update on data analysis software with a number of practice oriented works. We have now implemented a number of these tools and techniques in our daily routine work. It is fair to say that this adds significant value to our investment process. I very warmly recommend HKU MStat program to prospective students, who determine to pursue various research challenges, but also developed my confidence from our research. Comparing with one year ago, I not only learned to cope with various research challenges, but also developed my confidence from our well designed curriculum. I really appreciate the broad platform provided by the MStat program for prospective students, who determine to pursue further study or career development. I do think all I learned from our rigorous training will no doubt add depth and dimension to my research exploration. Definitely, I am proud to be a member of MStat family.

Jean-Paul BRASIER (MStat Part-time Graduate 2012)
Senior Vice President, Samena Capital

The Master of Statistics program enhanced me with academic background as well as practical ability. Throughout this one year program, I started to explore in this massive ocean of statistics as a PhD student in HKU, while this program sailed for me. Furthermore, this program equipped me with lots of useful statistical knowledge, which cultivated my skills in terms of undertaking current research. Comparing with one year ago, I not only learned to cope with various research challenges, but also developed my confidence from our well designed curriculum. I really appreciate the broad platform provided by the MStat program for prospective students, who determine to pursue further study or career development. I do think all I learned from our rigorous training will no doubt add depth and dimension to my research exploration. Definitely, I am proud to be a member of MStat family.

Targeted Students

The programme is for individuals who wish to acquire the knowledge, practical skills and professional views in statistics. Although most students come from a wide range of disciplines, those who have no former training in statistics should have considerable working experience.

Examples of backgrounds of admitted students in recent years:

**HKSAR Government departments/units:**
- Statistician
- Statistical Assistant
- Research Manager

**Education profession:**
- Panel Head
- Graduate Master
- Teacher
- Research Officer
- Research Assistant
- Assistant Computer Officer

**Hospital Authority/ Private clinics:**
- Associate Consultant
- Statistician
- Senior Medical Officer
- Medical Officer
- Research Nurse
- General Practitioner

**Banking and finance profession:**
- Head of Asset Management
- Vice President
- Assistant Vice President
- Marketing Executive
- Quantitative Trader
- Money Market Dealer
- Derivative Trader
- System Analyst/ Programmer
- Senior Investment Manager
- Portfolio Manager
- Risk Management Analyst
- Credit Risk Officer
- Policy & Acquisition
- Risk Manager
- CVM Analyst

**Private companies:**
- Senior Consultant
- IT Executive
- Senior Manager
- Data Analyst
- Engineer
- Administrator
- Software Engineer
- Barrister at Law
- Quality Assurance Officer
- Senior Marketing Executive

**Education profession:**
- Panel Head
- Graduate Master
- Teacher
- Research Officer
- Research Assistant
- Assistant Computer Officer

**Hospital Authority/ Private clinics:**
- Associate Consultant
- Statistician
- Senior Medical Officer
- Medical Officer
- Research Nurse
- General Practitioner

**Banking and finance profession:**
- Head of Asset Management
- Vice President
- Assistant Vice President
- Marketing Executive
- Quantitative Trader
- Money Market Dealer
- Derivative Trader
- System Analyst/ Programmer
- Senior Investment Manager
- Portfolio Manager
- Risk Management Analyst
- Credit Risk Officer
- Policy & Acquisition
- Risk Manager
- CVM Analyst

**Private companies:**
- Senior Consultant
- IT Executive
- Senior Manager
- Data Analyst
- Engineer
- Administrator
- Software Engineer
- Barrister at Law
- Quality Assurance Officer
- Senior Marketing Executive
Tuition Fees
The composition fee for the full-time programme is HK$128,000# for the 2015 intake and that for the part-time programme is HK$64,000# per year for two years. The fee shall 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).

The University allows Occasional Students to enroll in individual courses without registering in any particular programme of study. Tuition fee for an Occasional Student is HK$2,370# per credit in the academic year 2015-16.

# Subject to approval

Requirements
A Bachelor's degree with Honours, or equivalent qualification, with knowledge of matrices and calculus. Full-time applicant should have knowledge of introductory statistics and linear modelling.

Application
Online application can be accessed via http://www.asa.hku.hk/admissions/tpg

Application Deadline
February 28, 2015

Programme Director
Dr Philip LH Yu
BSc, PhD HK
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Postgraduate Prospectus:
http://www.asa.hku.hk/admissions/tpg/prospectus

Program Details:
http://www.scifac.hku.hk/pg/prospective/tpg
http://www.hku.hk/statistics/mstat

Support for International Students
http://cedars.hku.hk/
Useful information for students:
http://cedars.hku.hk/publication.php

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