SCHOOL OF COMPUTING & DATA SCIENCE
The University of Hong Kong

SAAS
DEPARTMENT OF STATISTICS & ACTUARIAL SCIENCE
The University of Hong Kong

統計決策科學

Statistical Decision Sciences
Bachelor of Statistics BStat

2027-28 Intake



DA
Decision Analytics
決策分析學

RM
Risk Management
風險管理學

ST
Statistics
統計學

STATISTICAL DECISION SCIENCES
Bachelor of Statistics (BStat)

Empowers scientific intellectuals to formulate solutions to society's challenges

History of the Department

Established as Department of Statistics in 1967 and renamed in 1998 to signify a major expansion, the Department of Statistics and Actuarial Science (SAAS) plays a cross-faculty role inherent in the interdisciplinary nature of the subjects it espouses. Through interrelated functions of teaching, research and consultancy, SAAS has served as a major contributor to statistical education for more than half a century. In 2024, SAAS joined hands with the Department of Computer Science to establish a new School of Computing and Data Science, in an attempt to create synergy in nurturing talents in statistical decision sciences, actuarial science, computing and artificial intelligence. The year 2027 marks the 60th anniversary of SAAS.

Science of Informed Reasoning

Humans form opinions and make decisions every day, often amid a world of uncertainties. Statistical Decision Sciences provides a scientific framework and reasoning toolkit for humans to make sense of real-life observations, whether in the form of small or big data, in their endeavour to live and think wise. Through the development and application of analytic and quantitative tools, it aims to provide comprehensive training in logical thinking, problem formulation, statistical reasoning and quantitative analysis, with an emphasis on both theory and applications. It equips students with problem-solving and decision-making skills applicable to almost all areas of science, business and research, and to many practical areas where evidence-based opinions and decisions are championed. In short, Statistical Decision Sciences is the generic science of informed reasoning vital to a rational world, especially one which is constantly challenged by ever-growing uncertainties and volatilities.

In Statistical Decision Sciences, three specialised Professional Cores* are offered under the degree

1. **Decision Analytics**
2. **Risk Management**
3. **Statistics**

Students shall make a preliminary choice of a Professional Core as an indication of their preferences upon entrance, and will be allowed to switch between the Professional Cores according to their interests, with no limit on quota, during their studies. The three Professional Cores cater for students with a good mathematics background and are designed to meet the steadily rising demand for specialist statisticians, decision scientists, quantitative analysts and data scientists in business, government, industry, research and teaching in local and overseas institutions.

** Upon completion of the programme, the Professional Core will be displayed on the transcript, indicating the specialisation of the BStat degree awarded to each graduate.*

Accredited University ROYAL STATISTICAL SOCIETY DATA | EVIDENCE | DECISIONS

Quality Mark ROYAL STATISTICAL SOCIETY DATA | EVIDENCE | DECISIONS

Professional Recognition

HKU has been awarded the status of an Accredited University by the Royal Statistical Society (RSS) since December 2023. The RSS accreditation provides reassurance that the teaching, learning and assessment within the accredited programmes is of high quality and meets the needs of students and employers.

In connection with this, the School has taken the opportunity to restructure the three disciplines, Decision Analytics, Risk Management and Statistics from originally Majors into Professional Cores under a new degree title Bachelor of Statistics (BStat). The new curricula are more comprehensive and are able to cover many recent developments that have found wider applications important for students' future career.

Graduates from one of the three Professional Cores, namely Decision Analytics (DA), Risk Management (RM) and Statistics (ST) under the BStat degree are qualified to become a Graduate Statistician (GradStat) designated by **RSS** (*https://rss.org.uk/membership/professional-development/gradstat/*). Upon passing certain courses, students are also deemed to have met the academic requirements of the **RSS Data Analyst award** (*https://rss.org.uk/membership/professional-development/data-analyst/).*

RSS Data Analyst award

RSS

In addition, the School will be applying for Professional Risk Managers' International Association (PRMIA) accreditation to further strengthen the programme's comprehensiveness and competitiveness, allowing our graduates to get exemptions from the PRM exams.

Major and Minor options (for non-BStat students)

2nd Major

- Major in **Decision Analytics**
- Major in **Risk Management**
- Major in **Statistics**

Minor

- Minor in **Risk Management**
- Minor in **Statistics**



Professional Core in

Decision Analytics

Decision Analytics aims to equip students with skills and expertise in leveraging and managing big data in real time. It enables students to examine, translate and classify data, uncover hidden patterns and unknown correlations, and most importantly, pinpoint precisely the most critical areas and implications suggested by data. Adopting a coordinated approach to teaching across three disciplinary fields, namely statistics, mathematics and computer science, with the assistance of statistically guided AI techniques, it provides students with solid training in making digitised information a strategic part of critical decision-making and resource allocation at high levels of clarity and accuracy. Built upon a synergy between data science and statistical reasoning, it also strives to enrich artificial intelligence with a strong touch of human intelligence. Decision Analytics students are trained with both rigorous statistical concepts and computational skills in data analytics. They are educated with problem-solving skills to provide optimized solutions to real life problems based on big data.

Decision analytics promotes the applications of statistical modelling, computer technology, operational research and simulation to decision-making and problem-solving in all organisations and enterprises within both private and public sectors. Applications of decision analytics are virtually to all kinds of disciplines: science, social science, education, engineering, medicine, economics, business, etc. Decision analytics students have a decided competitive advantage in becoming vital assets of any organisations which espouse informed decision-making.

Introductory Level

Disciplinary Core Courses

42 credits

Course code	Course title
COMP1117	Computer Programming
COMP2113	Programming Technologies
COMP2118	Data Structures and Algorithms Essentials
MATH1013	University Mathematics II
SDST1600	Statistics: Ideas and Concepts
SDST2601	Probability and Statistics I
SDST2602	Probability and Statistics II

Disciplinary Elective Courses

Select either List A or List B (12 credits)

List A (for general study)

MATH2012	Fundamental Concepts of Mathematics
MATH2014	Multivariable Calculus and Linear Algebra

List B (for advanced study)

MATH2101	Linear Algebra I
MATH2211	Multivariable Calculus

Advanced Level

Disciplinary Core Courses

36 credits

Course code	Course title
MATH3900	Optimization for AI and Data Analytics
SDST3600	Linear Statistical Analysis
SDST3612	Statistical Machine Learning
SDST4609	Big Data Analytics
SDST4610	Bayesian Learning

Disciplinary Elective Courses

Select at least 24 credits

COMP3251	Algorithm Design
COMP3252	Algorithm Design and Analysis
COMP3278	Introduction to Database Management Systems
COMP3407	Scientific Computing
SDST3620	Modern Nonparametric Statistics
SDST3621	Statistical Data Analysis
SDST3622	Data Visualization
SDST4011	Natural Language Processing
SDST4023	Medical Image Analysis
SDST4601	Time-Series Analysis
SDST4602	Multivariate Data Analysis
SDST4612	Interpretable Machine Learning
SDST4613	Causal Inference
SDST7609	Research Methods in Statistics

Capstone Experience Courses

Select at least 6 credits

SDST3799	Directed Studies in Statistics
SDST4710	Capstone Experience for Statistics Undergraduates
SDST4766	Statistics Internship
SDST4799	Statistics Project *(12 credits)*

Elective Courses *(66 credits)*

Candidates should take at least 66 credits of courses offered by any department, except Common Core Courses. Candidates would only need to take 60 credits of elective courses should they have taken "SDST4799 Statistics Project" *(12 credits)* as capstone experience course.

All courses are 6-credit bearing unless otherwise stated.

** The programme structures of the Professional Core are subject to change. For the most up-to-date syllabus, please visit the Department's website.*

CANDIDATES MAY CHOOSE TO TAKE UP TO FOUR 6-CREDIT POSTGRADUATE COURSES RELATED TO THEIR PROFESSIONAL CORES AS ELECTIVE COURSES, SUBJECT TO THE APPROVAL OF THE PROGRAMME DIRECTOR OF BSTAT, IN CONSIDERATION OF CLASS QUOTA AND OTHER ACADEMIC ISSUES.



Professional Core in
Risk Management

Risk Management aims to provide students with skills and expertise in the theory and methodology behind the scientific process of risk management, with application to quantitative modelling, financial risk analysis, statistics, actuarial science and other related areas of interest. It is designed to provide solid training in the concepts of the risk management process, statistical models and methods of risk management, and good risk management practice. Core courses in the curriculum emphasise fundamental concepts and nature of risk assessment, risk management and governance from different standpoints, while elective courses provide either training in specific risk management disciplines or an extension of knowledge aiming to give students more modelling, technical and analytical skills in risk management.

Risk Management students are well equipped with quantitative analytical skills in statistical modelling and exposure to modern risk analysis. The curriculum is closely related to the content of various professional qualifications in investment, finance and risk management, allowing students to better prepare for these credentials before and after their graduation. Career opportunities are available in financial institutions and large corporations including banks and consulting firms. Graduates readily find employment in government, banking, finance, risk management, insurance, IT, marketing research and many other related sectors in which expertise in quantitative risk analysis and management is in great demand due to the data-driven environment that has evolved worldwide at an incredibly fast speed. A growing number of professions depend on such an expertise to help manage risk in the midst of increasing uncertainty in the economy and an upsurge in financial and operational crises.

Introductory Level

Disciplinary Core Courses

30 credits

Course code	Course title
COMP1117	Computer Programming
MATH1013	University Mathematics II
SDST1600	Statistics: Ideas and Concepts
SDST2601	Probability and Statistics I
SDST2602	Probability and Statistics II

Disciplinary Elective Courses

Select either List A or List B (12 credits)

List A (for general study)

MATH2012	Fundamental Concepts of Mathematics
MATH2014	Multivariable Calculus and Linear Algebra

List B (for advanced study)

MATH2101	Linear Algebra I
MATH2211	Multivariable Calculus

Advanced Level

Disciplinary Core Courses

48 credits

Course code	Course title
SDST3600	Linear Statistical Analysis
SDST3609	The Statistics of Investment Risk
SDST3615	Practical Mathematics for Investment
SDST3618	Derivatives and Risk Management
SDST4601	Time-Series Analysis
SDST4607	Credit Risk Analysis
SDST4608	Market Risk Analysis
SDST4610	Bayesian Learning

Disciplinary Elective Courses

Select at least 24 credits

SDST3602	Statistical Inference
SDST3603	Stochastic Processes
SDST3610	Risk Management and Insurance
SDST3612	Statistical Machine Learning
SDST3655	Survival Analysis
SDST3910	Financial Economics I
SDST3911	Financial Economics II
SDST4603	Current Topics in Risk Management
SDST4606	Risk Management and Basel Accords in Banking and Finance
SDST4614	Quantitative Risk Management
SDST7609	Research Methods in Statistics
SDST7610	Probability Theory

Capstone Experience Courses

Select at least 6 credits

SDST3799	Directed Studies in Statistics
SDST4710	Capstone Experience for Statistics Undergraduates
SDST4766	Statistics Internship
SDST4799	Statistics Project *(12 credits)*

Elective Courses *(66 credits)*

Candidates should take at least 66 credits of courses offered by any department, except Common Core Courses. Candidates would only need to take 60 credits of elective courses should they have taken "SDST4799 Statistics Project" *(12 credits)* as capstone experience course.

All courses are 6-credit bearing unless otherwise stated.

* *The programme structures of the Professional Core are subject to change. For the most up-to-date syllabus, please visit the Department's website.*

CANDIDATES MAY CHOOSE TO TAKE UP TO FOUR 6-CREDIT POSTGRADUATE COURSES RELATED TO THEIR PROFESSIONAL CORES AS ELECTIVE COURSES, SUBJECT TO THE APPROVAL OF THE PROGRAMME DIRECTOR OF BSTAT, IN CONSIDERATION OF CLASS QUOTA AND OTHER ACADEMIC ISSUES.



Professional Core in **Statistics**

Statistics is a scientific discipline characterised by the development and applications of analytical and quantitative tools which involve logical thinking, problem formulation, statistical reasoning and intensive data analyses. The programme aims to equip students with powerful mathematical, analytical and computational skills, which are in great demand in practical areas where data are obtained for the purpose of extracting information in support of evidence-based decision making. It helps students to build a strong background in statistical concepts and theory, and provides broad and solid training in applied statistical methodologies. Indeed, such applications of statistics as an analytical and reasoning tool have been given growing prominence in the modern society. In response to this welcoming trend, the curriculum is constantly revised to meet a steadily rising demand for specialist statisticians, data scientists and quantitative analysts in government, business, finance, industry, as well as in research and teaching in local and overseas institutions.



Introductory Level

Disciplinary Core Courses

30 credits

Course code	Course title
COMP1117	Computer Programming
MATH1013	University Mathematics II
SDST1600	Statistics: Ideas and Concepts
SDST2601	Probability and Statistics I
SDST2602	Probability and Statistics II

Disciplinary Elective Courses

Select either List A or List B (12 credits)

List A (for general study)

MATH2012	Fundamental Concepts of Mathematics
MATH2014	Multivariable Calculus and Linear Algebra

List B (for advanced study)

MATH2101	Linear Algebra I
MATH2211	Multivariable Calculus

Advanced Level

Disciplinary Core Courses

42 credits

Course code	Course title
SDST3600	Linear Statistical Analysis
SDST3602	Statistical Inference
SDST3603	Stochastic Processes
SDST3620	Modern Nonparametric Statistics
SDST3621	Statistical Data Analysis
SDST4602	Multivariate Data Analysis
SDST4610	Bayesian Learning

Disciplinary Elective Courses

Select at least 30 credits from List S1 and List S2

List S1 (mainstream statistical topics)
(at least 6 credits)

SDST3612	Statistical Machine Learning
SDST3655	Survival Analysis
SDST4601	Time-Series Analysis

List S2 (statistical applications and other advanced topics)
(at least 12 credits)

SDST3021	Modern Biostatistics
SDST3604	Design and Analysis of Experiments
SDST3606	Business Logistics
SDST3607	Statistics in Clinical Medicine and Bio-medical Research
SDST3608	Statistical Genetics
SDST3613	Marketing Analytics
SDST3617	Sample Survey Methods
SDST4611	High-Dimensional Statistical Learning
SDST4613	Causal Inference
SDST7609	Research Methods in Statistics
SDST7610	Probability Theory

Capstone Experience Courses

Select at least 6 credits

SDST3799	Directed Studies in Statistics
SDST4710	Capstone Experience for Statistics Undergraduates
SDST4766	Statistics Internship
SDST4799	Statistics Project *(12 credits)*

Elective Courses *(66 credits)*

Candidates should take at least 66 credits of courses offered by any department, except Common Core Courses. Candidates would only need to take 60 credits of elective courses should they have taken "SDST4799 Statistics Project" *(12 credits)* as capstone experience course.

All courses are 6-credit bearing unless otherwise stated.

** The programme structures of the Professional Core are subject to change. For the most up-to-date syllabus, please visit the Department's website.*

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Scholarships

Dr Patrick S C Poon Scholarship in Statistics*

In 2012, Dr Patrick S C Poon made a generous pledge to the University to establish four scholarships in support of outstanding undergraduates who wish to pursue studies in Bachelor of Statistics programme. The scholarships will be awarded annually on the basis of academic merit to final-year candidates. Each scholarship is valued at HK$50,000, and is awarded on a non-renewable basis.

Ho Kam Chiu Lo Lai Ching Memorial Scholarship*

In 2021, Mr SK Ho (BSocSc 1980; MSocSc 1987) pledged a generous donation to establish a Scholarship in honour of his parents. The Scholarship shall support students at the Department of Statistics and Actuarial Science to engage in overseas enrichment programmes or exchange studies. Three scholarships, each of the value of HK$20,000, shall be awarded annually to outstanding students in the Bachelor of Statistics programme on the basis of academic merit.

QRT-HKU Scholarships

In 2025-26, Qube Research & Technologies Hong Kong Limited (“QRT”) kindly pledges to establish the QRT-HKU Scholarship at the University. Up to five scholarships shall be awarded to first year students, including those who pursue Bachelor of Statistics, based on the academic performance in prevailing public examinations for admissions to the University.

Saw Prize in Statistics*

To commemorate his 1969-71 stay at the University and to promote the development of statistics, Professor Saw pledged to establish a prize to be awarded in the form of a gold medal in 1971, which was converted to a cash prize in 2017. One prize of HK$8,000 shall be awarded annually to a final-year in Bachelor of Statistics programme, and who has obtained First Class Honours and the highest average marks in the papers taken for Statistics courses.

Saw Swee Hock Statistics Scholarship*

In 2005, Professor Saw Swee Hock, founding Professor of Statistics of the University from 1969 to 1971, donated a capital sum of HK$300,000 to set up a scholarship in recognition of the academic achievement of Bachelor of Statistics graduates whose first majors are in the Department of Statistics and Actuarial Science. Two awards of HK$5,000 each shall be awarded annually on the basis of academic merit.

School of Computing and Data Science Entrance Scholarship

Scholarships shall be awarded annually on the basis of academic merit as shown in the results of the relevant public examinations to local and non-local students freshly admitted to the undergraduate programmes of the School. Each award shall be of the value of HK$50,000 and tenable for four years.

Statistics and Actuarial Science (SAAS) Scholarships

Eighteen scholarships are made available each academic year by the Department of Statistics and Actuarial Science. The Department awards these scholarships annually on the basis of academic merit to outstanding students in different years of study who are pursuing the Bachelor of Statistics degree.

Statistical Decision Sciences (6779) Entrance Scholarship

Up to ten scholarships, valued at HK$50,000-$100,000 each, shall be awarded to local and non-local students admitted to the Bachelor of Statistics programme on the basis of academic meritas shown in the results of the relevant public examinations.

YF Life Scholarship in Actuarial Science and Risk Management*

In 2023, YF Life Insurance International Limited kindly pledged to establish the YF Life Scholarship in Actuarial Science and Risk Management at HKU, with an objective of nurturing talents for the insurance industry. Five scholarships, each of the value of HK$15,000, shall be awarded annually to outstanding undergraduate students in the Bachelor of Science in Actuarial Science and Bachelor of Statistics (Professional core in Risk Management) degrees on the basis of academic merit and performance in an interview, if arranged by the Selection Committee.

For more details about the scholarships,
please visit: *saasweb.hku.hk/programme#scholarship-opportunities*

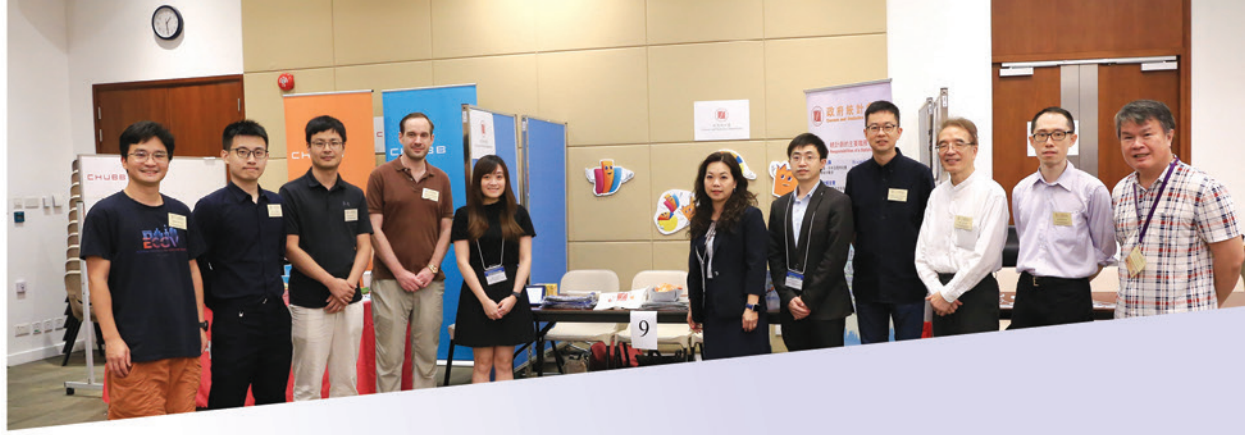
For details about all HKU’s scholarships,
please visit: *aas.hku.hk/scholarship-opportunities*

** Subject to Approval*



SAAS Professional Development (SAAS-PD)

SAAS-PD aims to equip students of Department of Statistics and Actuarial Science (SAAS) with the skills and knowledge to succeed in future at workplaces. It highlights a Career Advising Programme (CAP) consisting of a series of career preparation initiatives, with the objective to help students gain the skills, knowledge, experience, understanding of the world of work and connection needed to excel at the respective workplaces. On a broader horizon, SAAS-PD aims also to foster a close relationship between academia and industry, and to facilitate a mutually beneficial network concerning students' and fresh graduates' career opportunities.



Career Advising Programme (CAP)

- Tailored consultation on CV and cover letter writing
- One-to-one or group consultation on interview skills, e.g. mock interview
- Tailored modules of Professional Preparation Programme (PPP)
- Career talks
- Company visits
- Alumni sharing
- Corporate Mentorship Programme
- Career Fair



Alumni Mentorship Scheme

The alumni mentorship scheme provides two-way communication between mentors and mentees. Through regular gatherings and mutual sharing, mentees can learn from their mentors' life experience and, at the same time, better understand the employment situation and their career prospects. In return, mentors receive up-to-date information on the current student population, the Statistics and Actuarial Science Society (SASS), the Department, the School and the University at large. Mentors also enjoy opportunities to become acquainted with their counterparts working in similar fields.

Internship Programme

There is no better training than obtaining solid hands-on experience in the real workplace. Our Internship Programme serves precisely this purpose. As an intern, the student will gain insight into the challenging world and daily activities of an statistician while strengthening his/her technical, analytical and communication skills.

Under the Internship Programme, BStat students are eligible to use the Department's **Internship / Job Online-application System**, where related internships and other job openings including graduate positions will be posted.

The Internship Programme assists students by advertising part-time, summer, temporary and full-time internship positions, sending the CVs of interested students to employers, and arranging interviews for shortlisted students. Recruitment activities normally begin at least six months prior to the expected starting date of a position.

For more details about SAAS Professional Development (SAAS-PD) and our Internship Programme, please visit: *https://saasweb.hku.hk/current/saas-pd*



Partial list of companies participating in the Department's internship programme

- AXA Insurance
- BOC Group Life Assurance
- Census and Statistics Department, HKSARG
- Citibank
- Deutsche Bank AG
- Deloitte
- Ernst and Young
- FTSE
- FWD Life Insurance Company (Bermuda) Ltd.
- Goldman Sachs
- Hang Seng Bank
- HSBC Life
- KPMG
- Manulife (International) Ltd.
- Munich Reinsurance Co.
- Nielsen
- Hong Kong Public Libraries Head Office
- Hospital Authority
- Microsoft Hong Kong Limited
- SAS Institute Ltd.
- Swiss Re
- Standard Chartered Bank



More Information

Computing Facilities

The Department currently houses a statistical computer laboratory, which is equipped with up-to-date statistical software for teaching and learning and research purposes.

Student Society

The Statistics and Actuarial Science Society (SASS) has dedicated itself to promoting the study of actuarial science, decision analytics, risk management and statistics. It also serves to provide a sense of unity, promote the welfare of its members and maintain a harmonious relationship between staff members and students.

Every year, the SASS organises a variety of functions, including the alumni mentorship scheme, annual dinner, annual survey, firm visits and many more. The SASS works closely with the Department and serves its members with enthusiasm. They strive in the best interests of their members and aim to ensure they enjoy a fruitful and joyful university life.

HKU Worldwide Undergraduate Student Exchange Programme

At HKU, we aim to equip our students with not only academic excellence, but also the knowledge, skills, and values needed to become influential citizens in today's globalised world. To achieve this goal, we offer a variety of overseas learning opportunities. Studying abroad can be a transformative experience, and we actively encourage our students to take advantage of these programmes.

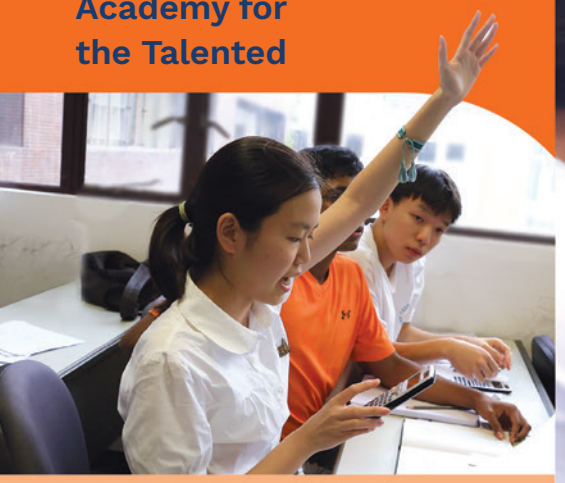
The HKU Worldwide Undergraduate Student Exchange Programme (HKUWW) provides exchange places from partner institutions (or host institutions) of the University for one or two semester(s). Students are offered exchange opportunities in world-renowned universities such as Harvard University, Columbia University, McGill University, the University of Toronto, the University of California at Berkeley, Davis, Santa Barbara and Los Angeles, the University of Melbourne, the University of British Columbia, the University of New South Wales, the University of Amsterdam, Georgetown University, the University of Waterloo, just to name a few.





Event Recap

Academy for the Talented





STATalk.ASpeak Series Public Lecture









HKU-ENSAI Exchange and Interaction Programme, Rennes, France







Campus Recruitment Talk by Hannover Re



Campus Talk by Global Association of Risk Professionals (GARP) on Financial Risk Manager (FRM) Examination



Employment Statistics of 2025 Graduates

Employment Sectors of Graduates	BSc(DA)	BSc(RM)	BSc(ST)
Commerce & Industry	90%	76.5%	62.5%
Civil Service	0%	5.9%	12.5%
Community, Social & Personal Service	9.1%	17.6%	0%
Educational Institutions	0%	0%	25%

Salary (Gross Monthly Income)	BSc(DA)	BSc(RM)	BSc(ST)
Average	HK$32,406	HK$25,797	HK$26,206
Median	HK$23,000	HK$22,975	HK$23,709
Maximum	HK$87,250	HK$53,000	HK$50,000

Remarks: The statistics are for the current BSc majors which are the predecessors of the BStat professional cores.

The world is becoming increasingly quantitative and data-focused in nature. Many professions depend on statistical knowledge to make decisions in the midst of economic uncertainty and operational crises. As the demand for quantitative and analytical skills continues to rise in virtually every field, an increasing number of talents in decision analytics, risk management and statistics will be needed within the private and public sectors in the society. Our Professional Cores under BStat provide a comprehensive training for those who wish to follow a career path in this direction. Our graduates readily find employment in various sectors, including but not limited to government, banking, finance, risk management, insurance, IT, marketing research, healthcare, hospitals, environmental protection, scientific research, academia and other related sectors in which statistical and analytical expertise is needed in a data-driven environment. They often play important roles in large-scale, multidisciplinary projects involving data analytics, providing guidance on statistical inferencing procedures for producing objective findings. Our graduates are also sought after by top graduate schools and research firms worldwide. In a new era which champions informed decisions, it is projected that job opportunities in decision analytics, risk management and statistics will remain favourable in the foreseeable future.

To date, our graduates have found employment in the following organisations [positions in brackets]:

- ABN AMRO N.V., Private Banking [Special Products Assistant]
- Acorn
- Aviva General Insurance Limited [Analyst]
- Bank of Communications [Credit Analyst]
- Census and Statistics Department, HKSARG [Senior Statistician / Statistician / Research Manager]
- Citibank (Hong Kong) Limited [Vice President]
- DKR Oasis, HK [Product Controller]
- Ernst & Young Advisory Services Limited [Actuarial Associate]
- First Shanghai Capital Limited [Strategist]
- FTSE
- Hang Seng Bank [Assistant Database Marketing Manager, Knowledge Management Department]
- Hong Kong Exchanges and Clearing Limited [Senior Officer]
- Hong Kong Monetary Authority [Senior Manager]
- Hong Kong Telecom (HKT) [Data Analyst]
- Hospital Authority [Research Officer]
- HSBC [Assistant Manager, Campaign Management, Marketing / Credit and Risk Manager, Asia Pacific Consumer Credit Risk]
- Independent Commission Against Corruption
- KPMG [Auditor]
- Magna Finance Limited [Financial Analyst]
- Marketing Decision Research (Pacific Limited) [Senior Research Executive]
- Pacific Century Insurance Company Limited [Actuarial Analyst]
- SAS Institute Limited [Senior Analyst]
- Société Générale Corporate and Investment Banking [Asset Liability Trainee]
- Sun Life Financial [Analyst]
- Synovate China Limited [Market Researcher]
- Willis Towers Watson [Analyst]



Testimonials

Dr. HUANG Ningyuan Teresa
2018 BSc(Statistics) graduate



My journey at HKU has given me tremendous personal growth, launched my career at Bloomberg and planted the seed for my research trajectory in the United States. Yet, none of this would have been possible without the generous support and exceptional education from SAAS. Thanks to the well-designed curriculums at SAAS, I got a summer internship with Bloomberg data team, which then led to a full-time return offer and two formative years of my career. I was also fortunate to be mentored by Prof. Stephen Lee during my capstone project; his guidance and support has continued to inspire my pursuit of research, from my master's studies at NYU to the completion of my PhD at Johns Hopkins University. Even after nearly a decade since graduation, I still look back fondly at those moments at SAAS --- preparing for exams with classmates, consulting professors during office hours, chopping roasted pigs for the Superpass dinner, and organizing orientation camps with my fellow committee members ("jong yaus"). Thank you, SAAS, for giving me a foundation and lifelong friendship that continue to shape who I am today.

CHAN Kong Wing Sarah
2019 BSc(Decision Analytics) graduate



It still feels like yesterday when I was pursuing my BSc in Decision Analytics at SAAS. Looking back, the programme was both rigorous and inspiring, equipping me with strong academic foundations, critical thinking skills, and an open mindset that continue to guide me today. I was fortunate to learn from exceptional professors and supportive staff in the department. The capstone project, summer research programme, and overseas exchange opportunities all sparked my passion for technology and data-driven decision-making, which eventually led me to pursue a career as a software engineer in the investment banking and tech industries. I'm deeply grateful and proud to be part of this remarkable family.

Dr. SU Zehao Taylor
2019 BSc(Decision Analytics) graduate



Being part of the Decision Analytics program was both exciting and rewarding. The program provided me with a solid, well-rounded education in statistics, striking a balance between mathematical statistics and applied statistical analysis. Courses in computer science further sharpened my programming skills, allowing me to work effectively with large and complex datasets. The diversity of the curriculum kept me intellectually engaged and laid a strong foundation for my graduate studies in statistics, and later, in biostatistics. Some of my most memorable experiences as a student include peer tutoring a statistics course, participating in a summer research project with CLP Power, and attending the ENSAI summer school in Rennes.

JUSUF Joshuandy
2022 BSc(Risk Management) graduate



I have always wanted to pursue a degree which involve quantitative skills that allows me to apply those skills in a real day-to-day scenario. I wanted to learn how to identify, measure, and manage various types of risks that affect financial institutions as well as how to make insightful decisions based on the skills I've learnt. Therefore, I believe HKU Department of Statistics and Actuarial Science and the risk management program really well equipped me with the relevant skills I need to achieve my career goal.

The flexible structure of courses allowed me to pick courses that suited my overall career goal to become an actuary as well as giving me options to deepen my understanding on a certain topic. Apart from the lectures, the group projects helped me to learn how to collaborate with different people and develop programming and presentation skills along the way. On top of that, various internship opportunities offered by the department allowed me to apply skills I've learned in university into a real job. Having the skillset to present to the senior management is probably the most useful and relevant skill I've obtained during my study at HKU.

I think my interaction with my classmates and professors were the most memorable one for me. I've improved my communication and networking skills from my day-to-day interaction with them. I believe having supportive people around me is what makes studying in university more meaningful.

CHAN Ching Yi Cecilia
2022 BSc(Statistics) graduate



Studying Statistics at HKU has built a solid foundation for my career. The program offers a broad range of topics to choose from, providing a platform to explore different domains in statistics. This helped me figure out what I'm really interested in and plan my career path. The coursework ensures exposure to both foundational theory and hands-on practice. Beyond that, the environment is supportive and encouraging. Professors are always willing to help—not just with coursework, but also with career advice. The knowledge and skills I've gained from the program have prepared me well for the future.

CHAKHEEVA Galina
BStat (Professional Core in Decision Analytics) student (2025-2026 entry)



I am excited to be part of the HKU's BStat in Statistical Decision Sciences first cohort that perfectly combines my passion for data science with my career aspirations. I chose this program because of its professional core in Decision Analytics, which lies at the heart of modern data science. I'm absolutely fascinated by how data can lead to pragmatic decisions in businesses and technology. I believe this specialization will give me the analytical skills and technical knowledge I need to become a successful data scientist in the future. What further confirmed my decision was the exceptional financial support available for students from both School of Computing and Data Science and the Department of Statistics and Actuarial Science to invest in and nurture new talents. I was honoured to receive the CDS Entrance Scholarship with this strong institutional backing which gave students like me the confidence and resources to fully focus on our academic journey and professional development. Beyond the great curriculum and financial aid, I've been really impressed by the community and practical opportunities here. From dedicated student clubs to mentorship programs, there's always something going on. It's not just about learning statistics here, but rather about people - both students and professors.

SU Boyu
BStat (Professional Core in Risk Management) student (2025-2026 entry)



As a proud member of the first cohort of HKU's Bachelor of Statistics in Statistical Decision Sciences, I am thrilled to be part of this pioneering programme. I chose it because I have always been fascinated by how data reveals insights for better decision-making. The curriculum's three professional cores (Decision Analytics, Risk Management, and Statistics) immediately appealed to me. My interest in the Financial Risk Manager (FRM) designation inspired me to major in Risk Management. The programme excels by connecting data analytics, optimisation, and behavioural sciences, transforming data into actionable strategies. With its strong focus on quantitative analysis, risk modelling, and entrepreneurship opportunities, it provides the perfect foundation for my career goals and my dream of starting my own business. Beyond the excellent curriculum, the programme offers incredible resources. In my first two months, I have already benefited from the Corporate Mentorship Programme, a Workplace Etiquette Workshop, and the SAAS Career Fair, all easing my transition from academia to the professional world.

LIU Yunchen
BStat (Professional Core in Decision Analytics) student (2025-2026 entry)



My six-week summer program at Exeter College, University of Oxford, was an invaluable academic and personal experience. Through Mathematical Modelling and The Ethics of AI, I experienced Oxford's small-class teaching and tutorial system, which encouraged me to read independently, think critically, and actively discuss my ideas with Oxford professors. I particularly valued the opportunity to apply knowledge from my study at HKU to real-life mathematical problems and contemporary debates in AI. The program also helped me develop a stronger habit of reading beyond lecture materials, which I hope to maintain throughout my future studies. Beyond academics, I chatted with students from different backgrounds and many local citizens. The small talk culture enables me to learn more about various cultures and lifestyles.



World-class Research and Excellence in Teaching and Learning

Since its establishment in 1967, the HKU Department of Statistics and Actuarial Science has always dedicated itself to reaching world-class standards with aspirations to be an international centre of excellence for both research and teaching and learning (T&L). Underpinning this enduring dedication is the Department's dynamic research profile with wide-ranging areas of expertise. Over the years, the Department has been awarded General Research Fund (GRF) grants by the University Grants Committee (UGC) to undertake numerous research projects in statistics and actuarial science.

According to the UGC's Research Assessment Exercise (RAE#) 2020, we rank No.1 in terms of the percentage judged to meet the standard of 4-star, the highest starred level for overall quality profile of research, out of seven comparable units of assessment for Mathematics and Statistics. Our impact and environment sub-profiles even reach 100% of 4-star quality, i.e. outstanding in terms of reach and significance, and world-leading in terms of vitality and sustainability respectively, as defined by the UGC.

For details of the Department's research directions, please visit:
https://saasweb.hku.hk/research/research-interests

 # The RAE is part of the UGC's commitment to assessing the performance of the UGC-funded universities in Hong Kong. It is a criterion-referenced exercise against agreed quality levels as defined by international standards. Over the years, the outcome of the RAE has provided guidance for universities' developments in respect of pursuing research excellence. Universities' performance in the RAE also informs the allocation of part of the Research Portion of the Block Grant.



Our Teaching Staff and Research Fields

Professor Tim J. BOONEN
BSc, MSc, PhD Tilburg
Actuarial Science; Capital Allocation; Game Theory; Insurance Economics; Optimal (Re)insurance; Longevity Risk Modelling; Risk Sharing

Professor K.C. CHEUNG
Head
BSc(ActuarSc), PhD HK; ASA
Actuarial Science; Dependent Structures; Stochastic Orders; Risk Measures; Optimal Insurance; Extreme Value Theory

Professor Alfred W.F. CHONG
BSc HK; MPhil CUHK; PhD HK, KCL; ASA
Actuarial Science; Quantitative Risk Management; Financial Mathematics; Risk Sharing and Pooling; Risk Aggregation and Resource Allocation; Catastrophe Risk Management; AI; Life and Retirement Products; Forward Preferences

Professor J.H. DU
BSc Sun Yat-sen; MSc Chicago; PhD Carnegie Mellon
Causal Inference; Assumption-lean Inference; High-dimensional Statistics; Statistical Genomics

Dr. Olivia T.K. CHOI
BSc UBC; MSc Oxon; PhD ISM
High Frequency Data Analysis/ Market co-integration; Analysis of dually listed companies across different regions

Professor L. FENG
BS Renmin U; PhD Rutgers
Statistical Machine Learning; Image Data Analysis; High-dimensional Statistics; Deep Learning

Professor Edwin C.H. FONG
BA, MEng Cantab; DPhil Oxon
Bayesian Inference; Bayesian Nonparametrics; Model Selection; Causal Inference

Professor Y. GU
BSc(USTC); PhD(N Carolina)
Survival Analysis; Semiparametric Models; Statistical Machine Learning; Biostatistics

Professor Marius HOFERT
MSc Syracuse; Dipl.-Math. oec., Dr. rer. nat.Ulm
Dependence Modeling; Computational Statistics; Data Science; Quantitative Risk Management

Dr. C.W. KWAN
BSc, PhD HK
Influence Observations; Multivariate Statistics; Non-linear Random Model

Dr. David LEE
BSc(ActuarSc), MPhil HK; PhD British Columbia; ASA; FHEA
Copula Modelling; Extreme Value Theory; High-dimensional Dependence Structures; Multivariate Tail Dependence

Professor Stephen M.S. LEE
BA, PhD Cantab
Bootstrap; Resampling Methods; Statistical Theory; Asymptotics and Applications

Dr. Eric A.L. LI
BSc HK; MEcon, PhD Syd; FHEA
Real Option Theory and Applications; Resource Economics; Quantitative Trading; Quantum Computing; Blockchain and Smart Contracts

Professor G.D. LI
BSc, MSc Peking; PhD HK
Time Series Analysis; Financial Econometrics; Quantile Regression; High Dimensional Data Analysis; Machine Learning

Professor W.Y. LI
BSc, BEc, MEc SWUFE; PhD Waterloo
Actuarial Science; Insurance Economics; Mathematical Finance

Professor C. WANG
BSc, PhD(NUS)
Random Matrix Theory; Time Series Analysis; High-dimensional Data Analysis

Dr. K.P. WAT
Associate Head
BSc(ActuarSc), PhD HK; SFHEA; FSA; FASHK; CERA; CFA; FRM
Actuarial Science; Financial Mathematics; Insurance Risk Models; Financial Risk Analysis; Enterprise Risk Management

Professor G.S. YIN
MA Temple; MSc N Carolina; PhD N Carolina
AI, Bayesian Methods; Big Data; Clinical Trials; Deep Learning; High-dimensional Analysis; Machine Learning; Survival Analysis

Dr. C.Y. ZHANG
BSc(ZJU); MStat, Phd(HK)
Bayesian Inference; Survival Analysis; Clinical Trials; Meta Analysis

Professor Dora Y. ZHANG
BSc Nankai; MSc, PhD NCSU
Big Data Analytics; Bayesian Methods; Biostatistics; Statistical Genetics; Bioinformatics; Public Health and Biomedical Research

Professor Michael M.Y. ZHANG
BS UCSB; MS, PhD UT Austin
Machine Learning; Bayesian Non-parametrics; Scalable Inference

Dr. Z.Q. ZHANG
BSc Nankai; MSc E China Normal; PhD HK
Time Series Analysis; Extreme Value Theory; Insurance Risk Modelling; Machine Learning

Professor K. ZHU
BSc USTC; PhD HKUST
Time Series Analysis; Econometrics; Causal Inference

Professor Michael B.Y. ZHU
BMath, MMath, PhD Waterloo; ASA
Actuarial Science; Quantitative Finance; Insurance Economics; Risk Sharing; Behavioral Finance

Professor Y. ZHU
BSc Peking; PhD Duke
Bayesian Statistics; Computational Statistics; Deep Learning; Nonparametric Statistics; Theoretical Statistics

Entrance Requirements and Admission Formula

6779 Statistical Decision Sciences

Entrance Requirements

JUPAS route

English Language	Level 3
Chinese Language	Level 3
Mathematics Compulsory Part	Level 4
Citizenship and Social Development	Attained (A)
Elective Subjects	Level 3 in 2 Category A subjects*

Admission Formula

1.5 x Math + **Best 4 Subjects***

** May include M1/M2*

Non-JUPAS Admission

Non-JUPAS route

Applicants with other local/international/national qualifications (e.g., IB, GCE-AL, SAT/AP, NJCEE) will be considered on an individual merit basis.

More details are available from the programme website at *cds.hku.hk/prospective-students/undergraduate*

More Information

For more information, please visit our website:
https://saasweb.hku.hk/programme

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The University of Hong Kong

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