



香港中文大學統計學系
Department of Statistics
THE CHINESE UNIVERSITY OF HONG KONG

Faculty of Science

ADMISSIONS
HANDBOOK
2023
ENTRY

Risk Management
Science
Programme

風險管理科學課程



Overview

Since its establishment in 2000, the Risk Management Science Programme has been the pioneer in Hong Kong for nurturing well-trained professionals in the risk management field.

Recent financial crises have stimulated public interest in risk management and raised awareness of its importance in today's investment environment. The ability to extract meaning from data and possess a thorough understanding of risk management has become vital to financial institutions. This programme is designed to fulfil the increasing demand for talent in this area.



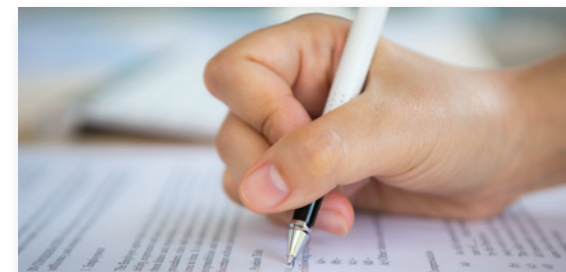
Our programme is tailored for students who want to pursue a career in the financial industries, and who are interested in quantitative and mathematical methodologies. It is specifically designed to equip students with the knowledge and skills to understand risk management from both theoretical and application perspectives in insurance, finance and other related areas. Risk management is an interdisciplinary subject. Our students receive solid training in statistics and other foundational subjects including finance, economics, accounting, mathematics and computer science. In addition, various enrichment activities such as alumni talks and seminars, research-based projects and industrial practicums provide in-depth professional training and act as a bridge between the classroom and industry.

Our graduates are well equipped for positions in risk management, finance, banking, insurance and related areas in which the quantitative and analytical skills of risk management are required.

Admissions

Basic Information

- Duration of Study: 4 years
- Number of Student Intake: 25
- JUPAS Code: JS4719



Admissions Requirements and Formula

JUPAS applicants must have achieved the following minimum levels in the Hong Kong Diploma of Secondary Education Examination (HKDSE). The programme admissions score is computed based on the applicant's best five subjects (after weighting). Bonus points are granted for each extra core or elective subject, if any.

Core Subjects	Chinese Language Minimum Level: Level 3 Weighting: 1.0	Core Mathematics Minimum Level: Level 3 Weighting: 2.0
	English Language Minimum Level: Level 3 Weighting: 1.0	Liberal Studies Minimum Level: Level 2 Weighting: 0.5
Elective Subjects	Mathematics (Module 1 or 2) Minimum Level: Level 3 Weighting: 2.0	Elective (Any one of Category A elective subjects) Minimum Level: Level 3 Weighting: 1.0

JUPAS Statistics

	HKDSE	CHI	ENG	MATH	LS	M1/M2	Best Elective	Second Elective	Third Elective
2022	Upper Quartile	4	3	5*	4	5*	5*	5	-
	Median	4	5	5*	4	5	5	5	-
	Lower Quartile	4	4	5	4	5	5*	5	-
2021	Upper Quartile	3	4	5**	4	5	5*	5	-
	Median	4	4	5*	5	5	5*	5	4
	Lower Quartile	3	3	5*	4	5	5*	5	-



Risk Analytics Stream

With the rise of big data, practices in the risk management industry have been revolutionised by instantaneous access to voluminous information. Advanced knowledge of data science and data analytics subjects such as statistical learning and data mining is increasingly important. In response to demand for talents in both risk management and data analytics, the Risk Analytics Stream is offered to elite students in the programme.

The stream places special emphasis on statistical science and computer science, including but not limited to subjects such as statistical inference, actuarial science and financial mathematics. Learning is augmented by various enrichment activities, such as mentorship, practicum in banks and start-up companies, and summer research. Upon graduation, students are well-equipped to become professional risk managers with a strong background in data science and data analytics. Job referral services on internships and graduate jobs and opportunities for further studies will be provided to students of the stream.

Students who have obtained a total score of 30 or above in their best five DSE subjects or a cumulative GPA of 3.7 or above in their first or second year of attendance may apply for specialisation in the Risk Analytics Stream.

Non-JUPAS Admissions Scheme

Students with non-HKDSE qualifications (e.g., public examinations such as the HKCEE, HKALE, IB, SAT, GCE, GCSE or Gaokao) and diploma/sub-degree credentials are welcome to apply via the non-JUPAS admissions scheme. For further details, please visit the homepage of the Office of Admissions and Financial Aid at <http://admission.cuhk.edu.hk/>.

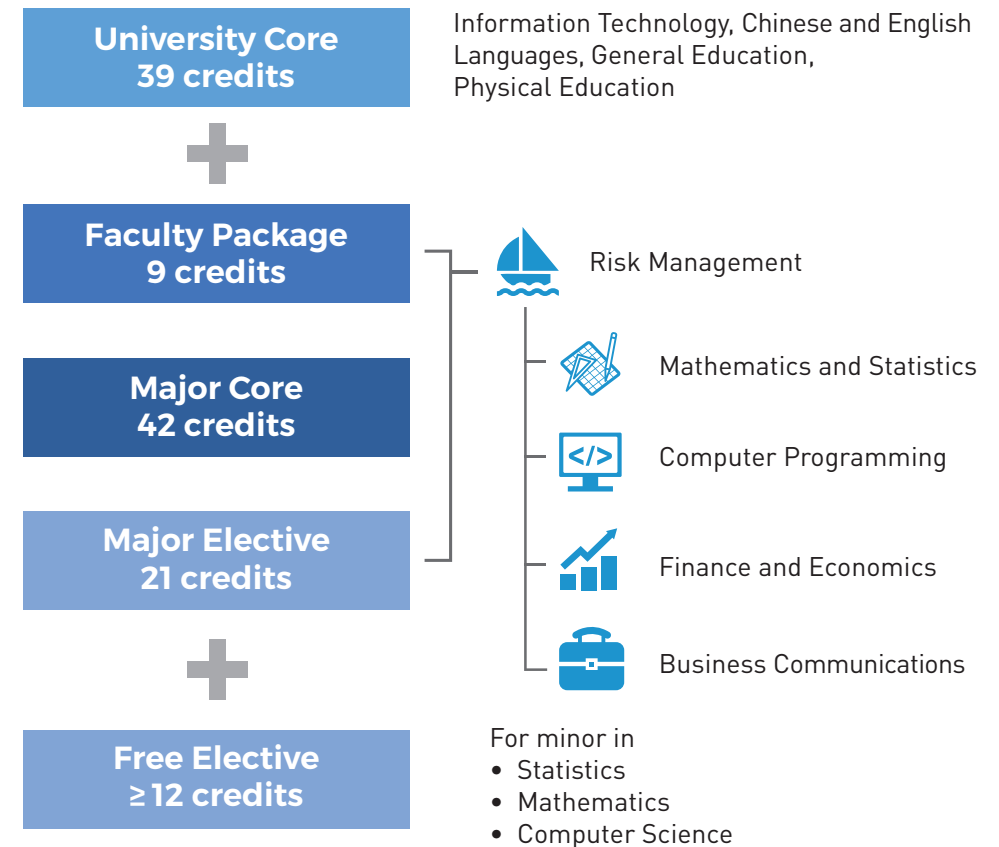
SAYT-RMSC Summer Course for Prospective Students

Science Academy for Young Talent (SAYT) organised by the Faculty of Science, CUHK provides a number of credit-bearing summer courses for secondary school students.

Our programme provides a foundation course (SAYT1006 – Risk Management and Actuarial Science) in which inspiring and interesting fundamental concepts of risk management are discussed. It is held in early August each year and is suitable for prospective students. One unit of university credit is waived upon completion of this course.

For application information, please visit the SAYT homepage at <https://www.sci.cuhk.edu.hk/en-gb/sayt/application>.

Curriculum



Curriculum Overview

Our curriculum places special emphasis on the analytical and critical aspects of risk management. The core courses in the curriculum cover fundamental theories and pragmatic knowledge from a wide range of subjects in mathematics, statistics, finance, accounting, decision science and managerial economics. Our elective courses enable students to explore the advanced aspects of risk management, including stochastic calculus, statistical modelling and simulation methods for financial applications.



Enrichment Activities

Our programme offers students a series of enrichment activities, such as alumni talks, professional sharing sessions and Bloomberg tutorial sessions. These activities support students' development as risk management professionals and encourage them to adapt to our ever-changing knowledge-based society.

The Chinese University of Hong Kong – University of Edinburgh Dual Degree Programme



Under the dual degree programme, students will graduate with two bachelor's degrees each from CUHK and UoE respectively. The University of Edinburgh is one of the UK's leading centres in Mathematics and ranked 16th in the world in the QS World University Rankings in 2022. In addition to core courses and capstone/ dissertation, the School of Mathematics offers a range of options in pure mathematics, applied mathematics, theoretical physics, statistics, operational research, financial mathematics and business analytics.

Programme Structure

Duration: 4 years

Study Pattern: first 2 years in CUHK + second 2 years in Edinburgh

1st Cohort

2023-24

Degrees Conferred

CUHK Major	CUHK Degree	UoE Degree
Risk Management Science (RMSC)	BSc in Risk Management Science	BSc in Mathematics and Business

Minimum Requirements

1. Cumulative GPA of 3.3 or above in their first year of studies (summer term included).
2. Students should have taken courses following the recommended study plan of dual degree students, or they may have to extend their normative study period as deemed appropriate. Please check with the Department of Statistics for more information.

Scholarships

- Four full-time first-year undergraduate students in the Risk Management Science Programme will be awarded the Department of Statistics Scholarships upon admission. The scholarship is granted based on admissions results. The amount is HK\$10,000 each.
- The Fan Fang Qi Ying Memorial Bursary is offered to a student in demonstrable financial need. The sum is HK\$10,000, tenable for a maximum of four years.
- The Department of Statistics and Faculty of Science provide Undergraduate Student Exchange Sponsorship/Scholarship Schemes to support students who wish to undertake exchange studies abroad.
- University- and College-wide scholarships are also offered on the basis of admissions results, academic performance and merit, in addition to financial need. For more information, please visit the website of the Office of Admissions and Financial Aid at <http://admission.cuhk.edu.hk/finance.html>.

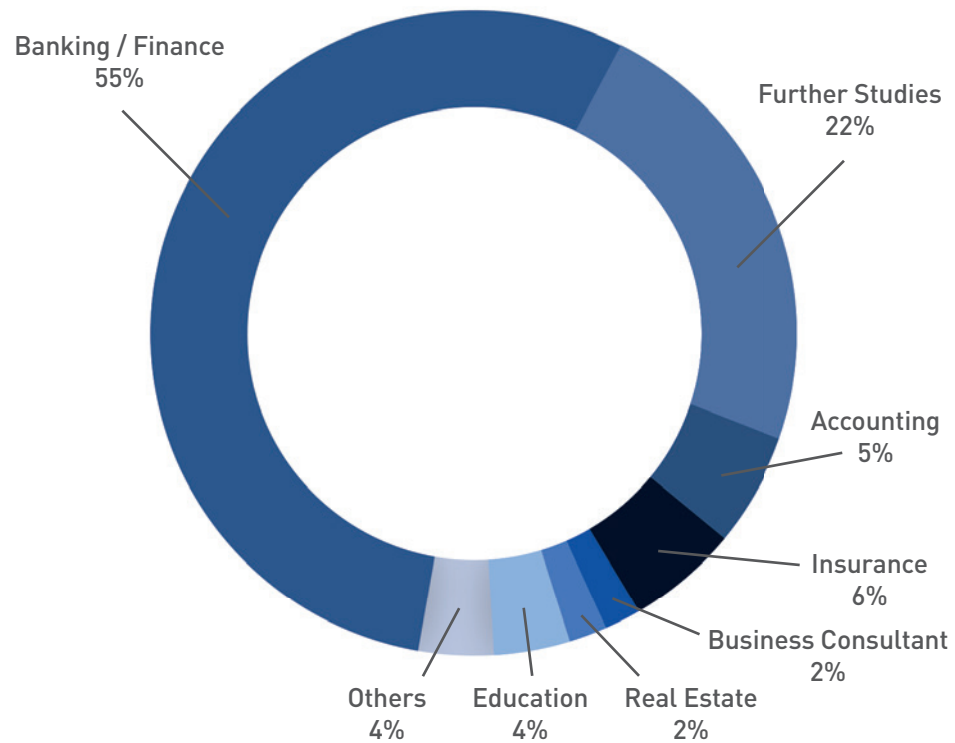
Career Prospects

Our graduates have a wide range of career choices in finance, banking, insurance and related areas. New graduates commonly take the positions of assistant risk manager, market risk officer, credit risk officer, market risk analyst, financial analyst, quantitative analyst, actuarial officer, accounting officer, etc. in major commercial banks, investment banks, security houses, insurance companies and accounting firms. Some of our graduates pursue Master's and doctoral degrees in prestigious schools in Hong Kong and overseas.



<h3>Investment Banks</h3>  <ul style="list-style-type: none"> • JP Morgan • Morgan Stanley • BNP Paribas • Goldman Sachs • Royal Bank of Scotland 	<h3>Retail Banks</h3>  <ul style="list-style-type: none"> • HSBC • Standard Chartered Bank • Bank of East Asia 	<h3>Financial Services</h3>  <ul style="list-style-type: none"> • Bloomberg • Convoy Financial Group
<h3>Government Services</h3>  <ul style="list-style-type: none"> • Census and Statistics Department • Hong Kong Monetary Authority • Airport Authority 	<h3>Accounting and Insurance Firms (Risk Advisory)</h3>  <ul style="list-style-type: none"> • Deloitte & Touche • KPMG • Ernst & Young • HSBC Insurance (Asia) • AIA Company Ltd 	<h3>Further Studies</h3>  <p>MSc/MPhil/PhD in</p> <ul style="list-style-type: none"> • Risk Management • Statistics • Operations Research • Financial Engineering

Employment Statistics of 2020 and 2021 RMSC Graduates



Experiential Learning

Internships and Practicum

Students have the opportunity to enhance their work experience through summer internships and other internship opportunities. A credit-bearing course (RMSC4202 Practicum) strengthens students' professional training and connects the classroom with the business world. Many participants have subsequently received offers to return to their positions as a result of their outstanding performance.

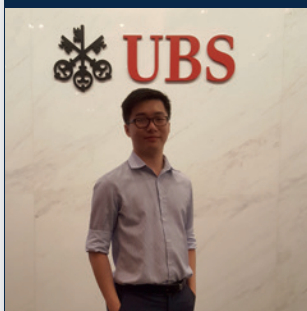
Some of the companies in which our students have had internships are listed below.

BNP Paribas	Citibank	Credit Suisse	DBS Bank
HSBC	Standard Chartered Bank	EFG Bank	Hang Seng Bank
Bank of China	Ernst & Young	Société Générale	Parexel International
HKEx	CASH Algo	AXA	AIA Group Limited
Gottex Penjing	AON Hong Kong Limited	Airport Authority	AEGON

Academic year	2021-22	2020-21	2019-20
Number of students participating in internships and practicum	23	20	31

Internship Sharing

Steve Chan



UBS AG

It was my great honour to join the Industrial Placement Program (IPP) at UBS AG last year. During this one-year internship, I was involved in many different projects to automate and improve processes throughout the trade lifecycle. I played different roles in these projects, including that of a business analyst, a developer and even a project manager overseeing the progress of the projects. Majoring in RMSC helped me greatly in this internship, especially in terms of hard skills and financial knowledge.

In terms of hard skills, the advanced courses enabled me to develop my programming muscles. Because coding is required for derivatives pricing and simulation in some courses, the training in Excel VBA and R enabled me to perform my tasks in the internship. The machine learning and data analysis courses also helped me

acquire both the theoretical knowledge and practical skills to process large amounts of data.

In terms of financial knowledge, RMSC courses provided me with a deep understanding of various kinds of financial products and exotic derivatives, rather than merely descriptive financial knowledge. For instance, CBBC (Callable Bull/Bear Contract), Variance Swap and other 'real-world' products were covered in these courses. Although stochastic calculus and the pricing of exotic derivatives might not have been much use in my internship work, studying these topics helped me to understand the nature and the background operations of these structured products. Surprisingly, these lessons facilitated my adaptability at the bank and smoothed the process of developing automation and process improvements.

Overall, this one-year internship gave me a glimpse of real-world practices and an opportunity to transfer what I have learnt in the RMSC courses to the workplace. Again, I am most grateful to UBS AG and the Department of Statistics for this opportunity and for their support.

David Duan



HSBC

For the first half of 2019, I had the opportunity to work for the Credit Risk Analytics team at HSBC (Hong Kong).

It was truly a challenging but rewarding journey, where I had the chance to learn and even implement the currently in-use credit risk models, such as the Probability of Default model. During the six-month internship, one of the largest projects I participated in was to develop an interactive R program that incorporates the risk models and visualises the computational results of the targeted models. It provided me not only with good programming training but, more importantly, with much valuable hands-on experience in real-world financial data analysis and modelling problems. These experiences

helped me to both reflect on my past learning and look towards possible future careers. Through frequent discussions and collaboration with team members, I also developed a certain workplace skillset that includes task prioritisation and efficiency in email communications. Last but not least, I feel rather fortunate to have met such lovely team members, who took great care of me and treated me as a close friend during the whole internship. They would always be there to support me whenever I was in need.

To secure such a job placement, our RMSC programme played a crucial role. The integrated curriculum means that we are exposed to many different fields, such as Statistics, Finance, and Computer Science, that are all related to the topic of quantitative finance and enhance our understanding of the topic from different perspectives. During the technical interview session, I had a nice discussion with one of the managers that covered various subjects, such as coding, regression modelling and VaR forecasting, most of which had been covered in previous RMSC courses. Moreover, my former colleagues reported that our programme has a very good reputation among big employers such as HSBC, especially when hiring for quantitative positions. This is a positive sign that we RMSC students are well positioned to secure our desired jobs upon graduation.

Harvin Leung



LegendArb Financial Limited

Interning as a quantitative research analyst at LegendArb Financial Limited gave me a great opportunity to learn about finance and trading. Most importantly, I gained exposure to quantitative and algorithmic arbitrage trading. Throughout my time at the company, all of my colleagues, and especially my supervisor Mr Richard SHI, gave me a lot of support and guidance, which allowed me to learn and perform my tasks efficiently in a friendly working environment. They also gave me great insights into arbitrage trading.

I was assigned several tasks, such as data analysis, strategic trade research, algorithm improvement and database handling. I started by doing some paper-based research to gain inspiration for creating new trading strategies. Next, I began coding with Python to build and back-test an algorithm. Once a strategy has been shown to be profitable through a back-test and live simulation, it can be deployed in the real financial market.

During my five-month internship, I gained a lot of knowledge in several areas. In terms of data handling, I learned how to build a dataset for use when building or back-testing an algorithm, including ways of handling missing data. I also had the chance to apply my quantitative analysis and trading skills in real markets, such as using spreads or regression when viewing charts and hedging during trading. These fundamental trading techniques provide a basis for the more complicated trading techniques I will learn in the future.

In addition, I used several programming-related tools and languages during the internship. For example, Excel VBA, SQL, Python, C#, Tortoise and the Bloomberg Terminal enabled me to more effectively and efficiently build programming structures and analyse datasets in greater depth.

In sum, my internship at LegendArb was a fruitful experience. I learned a lot, and it gave me a good opportunity to apply in practice all of the knowledge I had gained at undergraduate level. It showed me that programming plays an important role in statistics, especially with the rise of big data and machine learning. Again, I am grateful to LegendArb and CUHK's Department of Statistics for this internship opportunity and all of their help and support.

Yanqi Mao

Risk Analytics Stream



Credit Suisse

Last summer, I attended a 10-week internship at Credit Suisse's Markets division in Hong Kong, which was a highly fruitful experience. First, I learnt a lot about the structured products that the bank offers, such as equity linked notes and credit derivatives, which are much more complex than what I was taught about them at school. I also gained a deeper understanding of financial markets through tasks such as preparing informational material on market updates. Second, this experience deepened my interest on the aspect of selling. The company organised many guest lectures, in which managing directors were invited to share insights into their businesses. I also spoke with many full-time employees across the trading floor to get a better understanding of what their teams do. Moreover, the cross-cultural environment enabled me to improve my interpersonal and communication skills. Because Credit Suisse is an international investment bank, I had the opportunity to interact with people from diverse backgrounds during the internship. At the end of my internship, I delivered a final presentation to full-time employees and answered their questions.

The RMSC curriculum helped me to secure this opportunity and stand out during the internship. The well-balanced curriculum equipped me with the necessary knowledge of statistics, finance and programming. The RMSC courses also provided me with fundamental knowledge of derivatives and their pricing. In addition, the one-credit courses sharpened my presentation skills.

Jiun Wei Tan

Deloitte.



Deloitte

I pursued an off-cycle internship at Deloitte (Advisory) as an actuarial consulting intern in the Deloitte Actuarial and Insurance Solutions department. During my time there, I primarily assisted the project team in facilitating clients' implementation of the International Financial Reporting Standards (IFRS) 17, and also improved implementation processes within the internal system.

The client servicing with regard to the IFRS 17 implementation included tasks such as data mapping, establishing a modular IFRS 17 in alignment with the recommendation of the auditors, asset-liability model development and the back-testing of actuarial programme scripts. In terms of hard skills, the VBA and Python coding courses helped me immensely in tasks such as testing and checking the in-house system's actuarial programme scripts, which required the knowledge of coding in Python and R. Due to the nature of the new standards, the

methods for calculating asset-liability development and cash flow recognition were adapted on a case-by-case basis. I learnt about the various factors that must be considered to accurately categorise and accommodate various approaches such as the Premium Allocation Approach. The theoretical knowledge that I acquired from the actuarial science courses offered in CUHK helped me to understand the conceptual reasoning behind the breaking down of future cash flow, the time value of money and risk adjustment measures of non-financial risk.

Throughout this internship, I was able to gain a holistic experience in terms of both soft and hard skills. My daily tasks relied heavily on effective communications with the IT division in Shenzhen and Chongqing, and I met many aspiring colleagues from diverse backgrounds during my internship. I am grateful to have been given the opportunity to work in this multicultural department.

Candice Tsoi



Savills Valuation and Professional Services Limited

It was a pleasure to work as a summer intern in the China Valuation Department of Savills Valuation and Professional Services Limited. I gained a lot of valuable experience that helped enhance my technical and interpersonal skills during this internship.

One of the most memorable tasks that I completed during the internship was capturing companies' expected credit losses. As with the rest of the world, the pandemic tremendously impacted Hong Kong and China. As a valuator and risk manager, it is essential to understand how seriously the pandemic affected various financial products while conducting their valuation. Therefore, I was tasked with researching over 500 listed companies from various industries, including the medical, biotechnology and food industries. By

understanding how these listed companies handled the credit risk of their trade receivables, we can gain a sense of how to adjust for the effects of the pandemic.

My major studies in Risk Management Science helped me significantly throughout my internship at Savills. The integrated curriculum enabled me to acquire diversified knowledge from the fields of risk management, statistics, finance, accounting and computing. In the finance and accounting courses that I attended, I learnt how to effectively read an annual report, which helped me in conducting the research on the listed companies. In addition, the programming and Excel skills that I learnt from the RMSC courses helped me to simplify my work.

Overall, the internship was a fruitful and enjoyable experience that allowed me to gain practical knowledge of how to evaluate a product and handle risk. If provided with another opportunity to work as an intern in a big company like Savills, I would eagerly take it as I would like to further enhance my skills and practical knowledge.

Exchange

Students can participate in student exchange programmes organised by CUHK. The University and Colleges offer more than 280 student exchange programmes. For details of the University-wide exchange programmes, please visit the homepage of the Office of Academic Links at <http://www.oal.cuhk.edu.hk>.

Some notable destinations of the University-wide exchange programmes are listed below.

University-wide Exchange Programmes

United States

- University of Washington
- University of Wisconsin-Madison
- University of Pennsylvania

United Kingdom

- King's College London
- University of Aberdeen
- University of Cambridge
- London School of Economics

Australia

- The University of Queensland
- The University of Melbourne

Europe

- Universite Paris 1 Pantheon – Sorbonne
- Humboldt-Universität zu Berlin
- University of Helsinki

China

- Tsinghua University
- Fudan University

Japan

- Kyoto University
- Waseda University

Singapore

- National University of Singapore
- Nanyang Technological University

South Korea

- Seoul National University
- Ewha Womans University

Taiwan

- National Tsing Hua University



Academic year

2021-22

2019-20

2018-19

Number of students participating in exchange programmes

7

11

16

Exchange Sharing

Chloris Cheung

Uppsala University, Sweden



On 17 January 2020, I embarked on my journey to Uppsala University in Sweden. Despite having learnt about and been in touch with the outside world through the internet, I had never actually visited a Western country. Sweden is one of the Nordic countries, and the concepts of gender equality, environmental friendliness and social responsibility are everywhere. I still remember the amazement I felt when I heard that it is common for a man to be a stay-at-home dad and that it could be considered impolite for a man to hold the door for a lady. There were second-hand shops and zero-waste apps everywhere. Students from nearby countries had spent an extra twenty hours getting to Sweden by taking an expensive train instead of flying just to be environmentally friendly and responsible to our planet. You first experience these tiny details, and as they accumulate, you gradually realise the amazing cultural differences. I visited many cities and museums, and I started reading European history to get to know more about the places I had seen. Uppsala University has many exchange students, which allowed me to cultivate a sense of global citizenship by making friends from all around the globe.

Academically, I studied Multivariate Analysis, Time Series and other subjects, and I lived in a student hostel with a shared corridor. The lessons were not very different from those in Hong Kong, but I enjoyed how practical they were because we were asked to complete real time series analysis projects in the assignments. I feel that I learnt much more from undertaking these step-by-step projects than I did from the lectures, as they built up a map of connections in my brain and helped me to really absorb what I studied.

Overall, my journey to Sweden was way beyond my expectations. I was worried that it would be a boring country without many activities, but I found that, although it might not have the huge shopping malls and convenient lifestyle of Hong Kong, the harmonious and simple lifestyle in Sweden is so comfortable and relaxing. It really was a very pleasant journey.

Lee Mei Han

University of Waterloo, Canada



During the first half of 2022, I went to Waterloo, Canada, for an exchange programme. There are a few reasons why I chose the University of Waterloo. First, I had never been to Canada and had heard that Canada is a beautiful country with cherry blossoms in spring, waterparks in summer, colourful maple trees in autumn and snow in winter. The people are also known to be nice. Second, the University of Waterloo is known for mathematics, and it provides many courses related to my major such as risk management, statistics and finance.

I would like to share a few glimpses of my experience. My favourite course in the University of Waterloo was STAT 443 (Forecasting). This course taught us various models, methods and theorems to forecast the future using historical data, and the assignments, projects and exams required both theoretical and practical skills. In the beginning, I found the course difficult because it required a sophisticated level of coding in the R programming language, which I was not quite familiar with. The professors typically did not provide all of the code for every model, and instead required the students to write and explore the code for themselves so as to understand the models thoroughly. Although this was time consuming, there was a great sense of accomplishment when I finished these challenging assignments.

For the course project, in which we had to forecast future trends in the CAD/USD exchange rate, I was in a group of four students. All four of us were from different countries, and I was amazed at how international Canada is, and that I can meet people from all around the world. The project was not too difficult to complete, and it allowed us a lot of flexibility in modelling the data. After completing the project, I thoroughly understood the theories taught in the course as it gave us an opportunity to apply them in our daily lives. The actual application of the theories enabled me to acknowledge the power of statistics.

I am grateful that I received this opportunity for academic and cultural exploration, especially considering the uncertainties during the pandemic. The exchange experience provided me with many unforgettable memories and enabled me to step out of my comfort zone to learn more about myself and the world outside of my hometown.

Chung Tin Koo

McGill University, Canada



Participating in the exchange programme at McGill University, Canada was a wonderful experience. I enjoyed plenty of exchange activities. In our first week there, McGill University held some orientation activities for exchange students. The most valuable one was an orientation brunch. Nearly all of the exchange students were there. The event offered a free meal and gave us the opportunity to meet other exchange students. I made some friends during this event, and had the chance to interact with students from around the world.

Several courses were worth taking at McGill University. For example, I took a mathematical finance course that reviewed basic concepts of derivative pricing, and then introduced measure and probability theory and more advanced discrete and continuous time mathematical models with applications in option pricing. It was like an elementary version of the stochastic calculus course offered by the CUHK RMSC Programme. I was able to gain some basic knowledge of the topic that will benefit my studies in the future. I noticed that the lessons at McGill and CUHK are quite different. The professor did not upload lecture notes to an online platform. Instead, he just wrote notes on the blackboard for students to copy. This greatly encouraged students to attend lessons, as it would have been hard to catch up if they had skipped lessons.

In addition, the exchange programme greatly enhanced my personal growth. I tried a lot of new things. When living abroad, people normally cook for themselves. This gave me the chance to learn to cook. I started with basic dishes, like a simple dish of spaghetti with ready-made pasta sauce. When I got used to it, I found that cooking was fun and relaxing. Then I tried to cook some more advanced dishes, such as lasagne and rib-eye steak. It was nice to develop a new hobby during this period.

Moreover, the exchange programme gave me new inspiration in terms of my life path and goals for the future. I had the invaluable opportunity to study abroad for a term, experiencing new things and new places – all very different from Hong Kong. I truly believe that one should seize every opportunity to do something different. If you do not, you may never have a second chance. I would like to study abroad again to make myself more well-rounded and outgoing.

Ruiqi Mao

University of Massachusetts Amherst, US



I am honoured to be one of this year's recipients of the Undergraduate Student Overseas Exchange Sponsorship Scheme 2019/20 provided by the Department of Statistics. I am writing to express my sincere appreciation for the generous support of the Department.

I attended the University of Massachusetts (UMass) Amherst for a term-long academic exchange. During the semester, I took four courses offered by the departments of finance, economics, and philosophy. In addition to my academic pursuits, I was actively involved in several extracurricular activities, through which I was able to broaden my horizons and experience different cultures. Having had so many opportunities to communicate with people from all over the world with significantly diverse backgrounds, I learnt that it is always important to listen to the experience and views of others, and then to use this knowledge to enhance our own perspective. After the exchange, I will continue to study in CUHK while preparing to apply for graduate schools.

I participated in a number of extracurricular activities at UMass, and I would like to highlight one that comprised a series of seminars on the theme of inclusiveness. The seminars aimed to help students engage with issues of diversity and inclusion in business through participation in the Inclusive Leadership Summit. It seemed natural for me to be inclusive at the beginning, but I did not realise then how different identities affect people's careers and lives in society. The different races in the U.S. – White, Black, Asian, Latino and others – have made great efforts over a long period to fight for equal rights and respect. I learnt that we should avoid using certain misleading expressions in business situations, such as using 'sexual orientation' instead of 'sexual preference'. Although it may seem trivial, these details reflect one's sensibilities. This activity, together with other experiences such as traveling to New York City, Philadelphia, the Grand Canyon and California, enriched my exchange experience and broadened my perspective.

Altogether, the exchange opportunity has helped me to establish a solid foundation on which to build my future.

Exchange Sharing

Ling Poon

Danmarks Tekniske Universitet, Denmark

I am glad to have had the opportunity to go to Danmarks Tekniske Universitet (DTU) for a term-long exchange. I met people from diverse cultural backgrounds and gained knowledge of statistics and computer science from top-tier teachers.

Academically, during my time at DTU, I took computer science and statistics courses and focused on topics that I considered practical and interesting, like machine learning, discrete mathematics and software engineering. The teaching method at DTU is vastly different from that of the RMSC Programme at CUHK. The teaching staff encourage cooperation and experiential learning by placing a heavy focus on group work and projects. I learned a lot through this teaching approach. I am fortunate to have had very proactive, cooperative and capable group mates. Our group work was enjoyable and its outcome was good. The group projects simulated the workplace environment to a large extent. I now feel very confident and comfortable in communicating and cooperating with others for academic or work purposes.

Of the various courses I took, the machine learning course interested me the most. I worked with international students on a group project in which we predicted film ratings. Although we did not find an accurate model, we gained experience of applying machine learning to real-life problems. This stimulated my interest in data science and encouraged me to learn more about and find real-life applications for data science principles.

Socially, in the first week I was welcomed by a buddy group composed of old and new students from various countries, very similar to "O Camp" at CUHK. They were fun and very friendly.

The exchange was very rewarding, and I am grateful to the Department of Statistics for providing a scholarship to support students' personal development through this experience.



Ken Wun

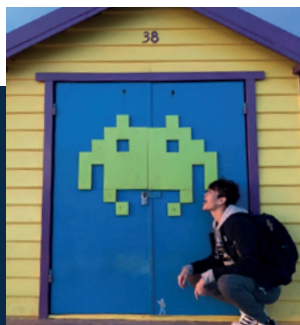
Royal Melbourne Institute of Technology, Australia

It is my pleasure to share my memories of the 2018-2019 exchange programme. Last term, I travelled to the Royal Melbourne Institute of Technology (RMIT) in Melbourne, Australia for a term-long exchange.

At RMIT, I took three courses related to risk management, statistical inference and advanced calculus. These courses were interesting and enjoyable. I really learned a lot, such as how to trade financial products in the real market. The lecturers' teaching skills really impressed me, and the classroom atmosphere was very different from that at CUHK. The teaching staff at RMIT focus on every student's personal abilities; they are willing to communicate with students after class to ensure that each and every one of them is keeping up with the lessons. When students fall behind, the teaching staff provide examples, exercises and tutorials for them instead of just ignoring the problem. Due to the close relationship between teachers and students, RMIT students are very proactive; they ask many questions during lectures. I really appreciated my professors' help, and I learned a lot from them.

Apart from studying, I travelled to many places in Australia, such as Tasmania, Sydney, Brisbane, the Gold Coast and Cairns. I tried so many new things, such as skiing, taking a road trip and camping in the desert. I also went scuba diving to see the coral in the Great Barrier Reef. Unfortunately, water pollution has caused coral bleaching for the last ten years. My instructor told me that if the situation does not improve, the Great Barrier Reef will soon disappear. This memorable experience reminded me of the importance of protecting the environment.

I wish to express my sincere gratitude to the University for its support and assistance during my exchange studies. This experience not only gave me the opportunity to explore the world and develop a global mindset, but also made me more independent and equipped me with the strength to overcome difficulties. I am grateful to have had such an invaluable experience of living and studying in a foreign country.



Extracurricular Activities

Competition Highlights



Ivan Leung

1st Runner-up in the Hong Kong Regional Final of the Global Management Challenge

The Global Management Challenge is the largest strategy and management competition in the world. Participants are required to make various numerical decisions on the daily operations of a simulated company within a time limit. This valuable experience teaches the participants how operational procedures and decision-making processes can affect a company's gains and losses. Using the skills and techniques learned in our undergraduate studies, our team analysed financial statements, studied opponents' strategies and projected future profits and losses. We overcame many difficulties, large and small, and I am proud of our excellent performance.



Jack Sung

Champion in the Hong Kong Tertiary Students Virtual Securities Investment Contest

The Bank of China (Hong Kong) held the Hong Kong Tertiary Students Virtual Securities Investment Contest. Participants were given HK\$1 million and RMB1 million to trade for stocks on a virtual securities investment platform. The contest taught me that choosing investments is a tough job. Investors must thoroughly study both the market and securities every day before making decisions.

I wish to express my heartfelt gratitude to the Risk Management Science Programme and BOCHK for providing me with theoretical and practical training in investment practices. I sincerely hope that more students from our programme will participate in activities organised by the industry. I am certain that such practical and fruitful experiences will equip students well for their future careers.

Alumni Sharing



Carlos Au-yeung

BSc in RMSC 2013

**Market & Liquidity Risk Associate
Banco Santander**

Recent economic instability has highlighted the growing importance of risk control for financial institutions and regulatory agencies. The RMSC Programme offers comprehensive training in risk analysis and is very helpful for students who want to pursue careers in the financial industry. The programme also provides students with a career counselling service, internships and research opportunities, ensuring that they can make informed decisions about their career directions after graduation.



Vincy Chen

BSc in RMSC 2015

**Operations Analyst
Goldman Sachs**

The Risk Management Science Programme provides intensive qualitative and quantitative training in risk analysis, which is extremely valuable given the volatility of the financial market and tightening of regulatory control.

The programme is challenging but certainly rewarding for those who take the opportunity to develop their skills. It provided me with the analytical skills and mind-set needed to approach problems effectively and find solutions.



Kam Kwok

BSc in RMSC 2018

**Risk Analyst
BNP Paribas**

The RMSC Programme covers an array of subjects, such as statistics, mathematics, economics and finance. The well-designed courses and practical training help you develop solid analytical and technical skills. On top of that, I strongly encourage students to go on an overseas exchange trip. This will give you the opportunity to broaden your horizons and improve your soft skills, which are particularly helpful at work. With the sheer variety of choices it offers, the programme can show you directions you never knew existed and help you discover your own career path.

After graduation, I joined BNP Paribas as a risk analyst. This role exposes me to a variety of risk areas. Undoubtedly, the RMSC Programme helped me to reach the point I am at now, from outsmarting others during job hunting to excelling at my daily work. The technical skills I learned enable me to contribute to various areas, such as credit risk, market risk and automation, and my soft skills help me communicate with people across the globe in this multinational bank. Working in a bank, I have seen a growing demand for risk specialists and people with a risk-aware mind-set. If you are interested in quantitative analysis and keen to join the financial industry, this programme is for you.



Carol Yin

BSc in RMSC 2016

**Quantitative Research Analyst
McKinsey Investment Office**

The RMSC Programme provides thorough training in theoretical knowledge, such as topics in statistics and math, and in practical applications, such as simulations. The cohort is small but close, and I received significant help from my professors and classmates. After graduating from RMSC, I gained an employment opportunity with the EY Quantitative Risk Advisory team through an RMSC alumnus.

The programme prepared me well for my career after graduation and for obtaining an advanced degree in Computational Finance at Carnegie Mellon University. After graduating from CMU, I decided to continue to explore the field of quantitative finance and joined McKinsey Investment Office as a Quantitative Research Analyst.



Yiran Huang

BSc in RMSC 2015

**Product Developer and Manager
UBS**

I graduated from the RMSC Programme in December 2015 and started my career as a data analyst in the consulting industry. In July 2016, I joined UBS as a graduate trainee in group risk. The trainee programme offered me many rotation opportunities in the risk control functions of investment banking, wealth management and asset management. The solid quantitative skills and extensive financial knowledge I had gained from the RMSC Programme enabled me to succeed in all of the rotations, through which I formed a comprehensive view of UBS Group. After the trainee programme, I chose to become a product developer and manager in UBS Asset Management. An important part of my job is performing competitor analysis, and I am able to leverage the strong data analytics foundation provided by the RMSC statistics curriculum. In sum, the RMSC Programme equipped me with the wide-ranging knowledge and rigorous thinking ability I need to work with various functions and businesses within the financial industry.



Jason Lau

BSc in RMSC 2017

**Valuation and Risk Controller
BNP Paribas**

The RMSC Programme provides solid quantitative training in statistics and mathematics and interdisciplinary knowledge of finance, economics and computer science. In addition to the well-rounded curriculum, students engage in projects and internships during which they can use their theoretical knowledge to solve real-life risk management problems.

This programme gave me a huge advantage in my current role as Valuation and Risk Controller at BNP Paribas. The wide product knowledge and good understanding of risk sensitivities that I gained from the programme enable me to effectively carry out my daily tasks: monitoring risk limits and escalating excess to the front office. The programme's rigorous training in derivatives pricing also gave me an advantage in the area of valuation.

Risk Management
Science
Programme

風險管理科學課程



Address: Department of Statistics,
The Chinese University of Hong Kong,
Shatin, New Territories, Hong Kong



Phone: (852) 3943 7931
Fax: (852) 2603 5188



E-mail: rmsc@cuhk.edu.hk



Homepage: www.sta.cuhk.edu.hk/RMSC



香港中文大學統計學系

Department of Statistics
THE CHINESE UNIVERSITY OF HONG KONG