Interdisciplinary Major Programme

BSc in QUANTITATIVE FINANCE AND RISK MANAGEMENT SCIENCE

計量金融學及風險管理科學

跨學科主修課程

For 2020-2021 Admission
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The Programme is jointly administered by the Department of Finance and the Department of Statistics at the Chinese University of Hong Kong. It combines the strengths and features of two well-established and highly successful programmes from the respective departments: the Quantitative Finance programme and the Risk Management Science programme. The Programme is one of the top programmes among all quantitatively related programmes in Hong Kong in terms of admission credentials.

As a major financial service centre, Hong Kong has a growing demand for professionals with both quantitative finance and risk management science background. The Programme provides state-of-the-art training in business and finance, risk management science, mathematics and statistics, and computing applications. By offering comprehensive academic and professional training, our Programme aims to nurture competent finance and risk management professionals who can work in investment banking, corporate and commercial banking, consulting, accounting and financial services, as well as in general management in the financial and government sectors. With our official tailor-made coaching schemes, students are also encouraged to participate in overseas exchanges and internships.

The Programme has established strong networks and partnerships with the finance industry over the years. Outstanding performance during internship renders strong motives for companies to offer them permanent positions upon graduation. The Programme also enables students to build up a solid theoretical background for pursuing further study, at the Master or PhD levels, in economics, finance, actuarial science and insurance, mathematics, statistics and risk management science.

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ADMISSION REQUIREMENTS

The minimum criteria for applications are four core and two electives in HKDSE with the following requirements:

- Level 3 or above in Chinese Language
- Level 3 or above in English Language
- Level 3 or above in Mathematics
- Level 2 or above in Liberal Studies
- Level 3 or above in any two elective subject

In terms of the median admission scores of the best five subjects, four out of the top ten programmes/streems among the JUPAS institutions in the territory are CUHK programmes, including Medicine (Global Physician-Leadership Stream), Global Business Studies, Medicine, and Quantitative Finance and Risk Management Science

JUPAS ADMISSION GRADES


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COURSEWORK REQUIREMENTS (SUBJECT TO REVISION)

Faculty Package
- University Mathematics
- Economics for Business Studies I & II

Risk Management Science
- Introduction to Risk Management
- Simulation Methods for Risk Management Science and Finance
- Statistical Modelling in Financial Markets

Quantitative Finance
- Financial Markets
- Investment Analysis and Portfolio Management
- Financial Management / Financial Management: Foundations and Analysis
- Risk Management and Insurance

Computing Applications
- Computer Principles and Programming (C / C++ / Java / Visual)
- Business Information Systems / Data Structures and Applications / Fundamentals in Information Systems

Elective Courses
- Statistical Principles of Deep Learning with Business Applications
- Banking and Finance Practicum
- Practicum
- Corporate Finance: Theory and Practice
- Multivariate Techniques with Business Applications
- Actuarial Science
- Stochastic Calculus for Finance and Risk
- Time Series
- Risk Management with Derivatives Concepts
- Financial Data Analytics with Machine Learning

Remarks:
1. M1 or M2 is counted as an elective.
2. Double weight in English, Mathematics and M1/M2.

OVERSEAS EXCHANGE

QFRM students are encouraged to study and experience life in overseas universities. Over 85% of our students had exchange experiences and they participated in exchanges with universities around the world. Previous students’ exchange places include:

**United States**
- University of California, Los Angeles (Berkeley, Davis, Irvine, Los Angeles, San Diego, Santa Barbara)
- University of Pennsylvania
- University of Southern California
- University of North Carolina at Chapel Hill
- University of Notre Dame
- University of Texas at Austin
- University of Washington

**Canada**
- McGill University
- Queen's University
- University of British Columbia
- University of Ottawa
- University of Toronto
- University of Waterloo
- York University

**France**
- École des Hautes Études Commerciales
- TELECOM École De Management
- Sciences Po

**Germany**
- Free University of Berlin

**Japan**
- Keio University

**UK**
- Durham University
- University of Cambridge
- University of Glasgow
- University of Kent
- University of Manchester
- University of Southampton
- University of Warwick

**Denmark**
- Copenhagen Business School
- Technical University of Denmark
- University of Copenhagen

**Sweden**
- Lund University
- Uppsala University

**Switzerland**
- University of St. Gallen

**Austria**
- Vienna University of Economics and Business

**Ireland**
- University College Dublin

**Canada**
- University of British Columbia
- University of Ottawa
- University of Toronto
- York University

**Canada**
- York University
- University of Waterloo
- University of Toronto
- University of Ottawa
- University of British Columbia
- McGill University
- University of St. Gallen

**China**
- Fudan University
- Nanjing University
- Peking University
- Southwestern University of Finance and Economics
- Tsinghua University
- Xi'an Jiao Tong University

**Australia**
- La Trobe University
- University of Adelaide
- University of South Australia
- University of Sydney

**Student Exchange Experiences**

**University of Pennsylvania**

**Aaron Liu**

Joining an exchange programme was one of the best decisions of my life. During my semester at Wharton, I learnt a lot both academically and culturally. The courses there were very different from those at CUHK. Students complete multiple group case studies, weekly reading and individual projects in addition to quizzes and exams. The assessments usually don’t count for more than 30% of your overall mark, which means that you have to work hard on everything to secure a good grade.

I met some amazing people there. I learnt a lot from exchanging thoughts and experiences with the good friends I made.

**University of California, Los Angeles**

**Russell Huang**

Exchange life at UCLA was a fascinating cross-cultural experience. California is the motherland of adventure, which set the tone for my stay. In my three months there, I made real academic advances in subjects such as mathematics, economics and astronomy. Apart from that, my footpaths crossed the stunning city skyline and beautiful national parks. Moreover, the friendships I found with peers from diverse backgrounds opened up precious dialogues that have changed my life. I am grateful for having had such an opportunity in my study programme.

**University of California, Berkeley**

**Amy Yang**

I stayed at the University of California, Berkeley (UCB) for one year after joining the CUHK exchange programme. UCB provides a variety of exposures so that everyone can find their own place there. In addition to taking a graduate-level financial engineering course, I worked as a research assistant for an economics professor and gained more insight into academic research. Berkeley organised various social events for exchange students and gave me the initiative to build relationships with people from different cultural backgrounds.
**Student Exchange Experiences**

**Dickson Yip**

I am very glad that I was able to spend my second year at the University of California, Davis. In Irvine, I had tons of chances to explore new things, and to experience new knowledge, new people and a new life! With a solid foundation from the CUHK, I was able to further my studies in mathematics, statistics and finance through advanced courses. However, studying abroad is more than just learning. I was fortunate enough to have the opportunity to be a team member of a Student Managed Investment Fund, an association that manages real money for an institution. I learned a lot of practical skills in investment and wealth management through working in the team. I will never forget how I worked through the night with my teammates every week!

**Wei-Zhia Kua**

Before I came to Brown in my sophomore year, I believed that everything about university was, and should be, career-oriented. However, studying at Brown challenged that deep-rooted assumption of mine and offered me the opportunity to question my educational aspirations. There, I experienced a very different, student-led learning environment in which I was invited to take control of my own education and was motivated to engage in independent research and reading. From stimulating class discussions to insightful conversations around the dinner table with friends, during office hours with professors and research symposia with the prominent academics, from hosting a student from Kansas to enjoying concerts and musicals or volunteering at events, I was constantly inspired by the people I met: students, scholars, professors, musicians and even artists.

My journey of self-exploration at Brown had its ups and downs, but I learnt to deal with my own vulnerabilities and to ask for help when needed. Studying at Brown has been one of the greatest, most life-changing experiences I have ever had! I feel privileged and grateful to have had the chance to study there and I strongly encourage every student to join an exchange programme to explore, learn and grow.

**Harry Suen**

During my exchange at UC Davis, I experienced a different style of learning and enjoyed travelling in California. One thing that surprised me was the enthusiasm for learning among the students at UC Davis. I used to have the impression that students in the West were more laid-back in their studies, but that is not what I observed during my exchange. The students were well prepared for class, made detailed notes and participated very actively in their classes and study groups.

I made use of my free time in the US to travel around, and went to several fascinating country parks such as the Grand Canyon and Yosemite. Although it took a long time to reach these attractions, the views there were so beautiful that it was well worth it.

**Dominic Leung**

I had an enjoyable semester at Stony Brook University. Located in Long Island, the eastern part of New York, Stony Brook is a peaceful place, in stark contrast to Hong Kong. People sleep earlier, work fewer hours and never rush. Spending four months here was very relaxing because of the spacious and tranquil environment. Sitting in a coffee shop, leaving all my problems behind and seeing the snow fluttering outside was one of the most enjoyable moments, which you can’t experience in Hong Kong.

Stony Brook is a great place to study quantitative finance because of its affiliation with one of the best quantitative hedge funds, Renaissance Technologies. From close up, I got a better picture of how modern finance (or quantitative finance) develops. A study exchange is definitely worthwhile, I got a better picture of how modern finance (or quantitative finance) develops. A study exchange is definitely worthwhile, and I just wish I could have stayed longer.

**Leung Wai Nam**

Studying as an exchange student at Sciences Po for one semester was a truly valuable experience for me. With nearly half of the students being international, Sciences Po provided me with the opportunity to communicate with people from all around the world and learn more about different cultures. I mainly studied International Relations courses at this world-famous political sciences institution, which has nurtured seven of the last eight French presidents. There were many discussions and interactions in class, and I benefited a lot from them. Studying in Europe meant that it was not difficult to travel around. During the exchange period, I stepped on the soil of more than 20 countries and saw many things that I have never seen in Hong Kong. It was a great experience, and I just wish I could have stayed longer.

**Paul Lo**

This exchange programme is definitely a far-reaching one. I can still remember every single moment as if it happened yesterday. When I first came to the campus, I went to the residence straightaway. The most exciting part was that the residence was equipped with an open kitchen and a dining room shared by four exchange students. I met a German, an Australian and an Irish student. Not only did we share many experiences from our countries, but we also cooked our traditional dishes for each other. It was so fun!

To me, life at UCD was less stressful than life at CUHK. Although the classes were still competitive and the students were very eager to learn and succeed, they participated in a lot of student activities and sports as well. Everyone seemed to have a packed schedule. Travelling is always the best part of this exchange experience. I tried visiting several cities (e.g., London and Amsterdam), both on my own and with the people I met at UCD. Both experiences were awesome. What happened in these few months will forever stay in my mind.
University of Toronto

1. Desmond Yau

Under the QFRM programme, I have been very fortunate to have an exchange experience at the University of Toronto. Toronto is truly a beautiful and diverse city where you can meet a lot of people from all over the world. It is truly a good destination for exchange studies.

I enjoyed my stay in Toronto, both for studying and travelling. The University of Toronto is a very good school which provides an excellent academic environment and many interesting courses. I still remember the mock trading session in the finance lab for my fixed income class. In addition to studying, I had a great time exploring the city with some of my friends and visiting the beautiful city of Montreal. I truly recommend everyone to grab the chance and go on an exchange to explore new worlds during their four years of studies.

2. Victor Kwok

My exchange to the University of Toronto (U of T) was a truly memorable experience. U of T puts the onus on students to learn independently through discussion and creativity, so instead of ‘lecturing’, the professors guide students to discuss different topics and invite them to present their ideas. Moreover, everyone I met at U of T was really kind and helpful, which made me feel at home.

I enjoyed exploring Toronto and other cities in Canada. Toronto is a vibrant city that abounds with artistic atmosphere. In addition to myriad museums and galleries, the annual arts festival sees thousands of visitors swarm to exhibitions all around the city. A highlight for me was my visit to Yellowknife in northern Canada, where I witnessed the spectacular aurora borealis ‘dancing’ in the sky.

University of British Columbia

Cody Fu

My exchange to the University of British Columbia was a very enjoyable and fruitful experience.

I took courses in a variety of fields, including finance, mathematics, statistics and programming. I found the teaching style there to be very different from that in Hong Kong: it is more interactive and involves more group work and case study analysis. The university offers a wide range of societies that organise many activities to provide students the opportunity to mix with local and international students.

The travel opportunities in and around Vancouver were a bonus to university life. The scenery of the Whistler ski resort is out of this world! The university offers a wide range of societies that organise many activities to provide students the opportunity to mix with local and international students.

University of Cambridge

Han Xu

The exchange experience in Cambridge is marvellous. With the hope of exploring new possibilities, I took three challenging courses, each of which has either changed my stubborn view towards a specific field that I have already learned, or led me into a fascinating field that I have never noticed before. For instance, Foreign Policy Analysis is my favourite. Frankly speaking, it is quite relaxing to take summer courses in Cambridge, where we do not have to worry too much about grades.

It is such a cozy environment, letting us think and discuss freely and spark new ideas. One professor stated, “What I need you to do in my class is not agree with me. Disagree with me. Challenge me.” Therefore, I took every class as if you were an explorer or a risk-taker, applying for the exchange is a memorable experience.

In Denmark you will never be stressed, because life in Denmark is all about being “hygge,” which means “cozy” in English. Unlike Hong Kong, you will never find people working at night. Instead, the Danes will just take their time and have fun with their families and friends. I am really glad to have had a chance to live in the happiest country on Earth.

University of Copenhagen

VINCENT LIU

An exchange programme is much more than just studying in a different school. These four months in Denmark changed my life completely. Living away from home and having to overcome obstacles all by myself, I became much more mature than before.

I attended my exchange programme at the Vienna University of Economics and Business in Austria from February to June 2017, where I studied Strategic Management and Social Policy. Besides my study, I also travelled to other countries, many with very beautiful scenery. Many good and bad things happened during my exchange study, and I learned to be much more independent from other people, including my parents. I made so many new friends and experienced different lifestyles, which are quite different from mine. I enjoyed the wonderful moments in Vienna very much, and I found it a much more liveable city than Hong Kong.

COPENHAGEN UNIVERSITY

MARCO LUI

Exchange programmes may appear to many people as just an opportunity to travel around without any concerns. To me, the journey of study in Copenhagen meant so much more.

The whole period, from the very first day I got the offer to the day I returned to Hong Kong, was a major challenge to me, both physically and mentally. Lots of preparation had to be done before departure, alongside the excitement and nervousness. Time management was important during the six-month study, as it was impossible to finish all of my goals within the limited time. How to achieve as much as possible, while balancing study and travel, was the biggest challenge for me. At the end of the trip, facing the culture shock of returning to Hong Kong was the final hurdle.

Yet, I still treasure this experience. Making new friends enhanced my social life, while travelling alone made me more independent and broadened my horizons. If you are an explorer or a risk-taker, applying for the exchange is a must, and perhaps it will become the most unforgettable and unique memory of your life.

Vienna University of Economics and Business
STUDENT EXCHANGE EXPERIENCES

THE UNIVERSITY OF SYDNEY

BRYAN WANG

Last year, I exchanged at the University of Sydney for five months. That was an unforgettable experience. During my exchange, without too much concern for my academic results, I took a lot of advanced and interesting finance courses and benefited a lot from it. Also, because my student hostel held a party every week, I made a lot of local friends at those parties, and we are still keeping in contact. Furthermore, Sydney is an international city, and only 40% of the people were actually born there. By just simply talking with people on the street, I have heard a lot of interesting stories. During the school vacation, I also travelled to New Zealand. I recommend everyone to go for an exchange, and Australia is definitely a good country for your consideration.

TSINGHUA UNIVERSITY

HARRY CHEN

I consider myself very lucky to have had the opportunity to participate in the exchange programme to Tsinghua University, one of the top universities in Asia and the world. Based in Beijing, Tsinghua runs many general education courses related to Chinese culture. It is renowned for its science and engineering faculties and offers an array of intermediate financial theory and cases in corporate finance. To top off this all-around education, the university’s rich politics and top academics. Tsinghua has a very welcoming atmosphere, especially at Schwarzman College, where students from different backgrounds can share opinions and brainstorm. Tsinghua University offers a wide variety of English courses for exchange students, which really help people like me who are not sufficiently proficient in Japanese to take the local students’ courses. I have been living in a dormitory and getting along with my roommates. I have also met a lot of people from Japan and all around the world, and have hung out with them during weekends and holidays. Definitely give it a try if you are a true lover of Japanese culture!

NATIONAL UNIVERSITY OF SINGAPORE

JASON ZOU

Hi, I am Jason, now a penultimate year major student in QFRM. I participated in an exchange study at the National University of Singapore (NUS) in the second semester of my third year. It was a great experience. The NUS is very beautiful, the people there are nice and the students work very hard, even harder than at CUHK. On the exchange, I did not need to worry about my GPA as I did in CUHK, so I took courses that I was interested in, like Japanese Study and Philosophy, which was great fun. There were orientation activities organised just for exchange students, so it was quite easy to meet students from all over the world and make friends with them. We often went out to have fun, travelled around the nearby countries and talked about different cultures. All in all, going on exchange is like taking a break from the busy study life of CUHK. It is a chance to embrace different cultures, and to experience life in another university in a different country.

STUDENT INTERNSHIP EXPERIENCES

KEN YUEN

MORGAN STANLEY

QFRM has been hugely rewarding and resourceful for my academic, career and professional development through its solid training and support, which were well positioned to help me secure a semester internship at Morgan Stanley.

I was an off-cycle semester intern at both the Corporate Derivative Trading Desk and the Exotic Derivative Trading Desk within the Institutional Equities Division of Morgan Stanley. Every day was dynamic and full of challenges due to the dynamic market and highly sophisticated aspects of each trading desk. Thanks to the quantitative and financial training of the QFRM programme, I was able to handle the steep learning curve and understand the complex derivative structures, pricing models and risk profiles of each of the structures.

ALAN LIU

J.P. MORGAN

It was a wise decision to take the QFRM programme.

With full support from the programme, I joined the Mergers & Acquisitions team at J.P. Morgan as a semester intern. During the 15-week period, I worked on in-depth company and industry research, financial analyses and models and client pitches. I really enjoyed the huge responsibility when developing meaningful solutions for clients or executing significant transactions.

In QFRM, you will have support from both the Science Faculty and Business Faculty, you will meet groups of competent and passionate classmates, and you will get all-round financial and risk management training.

NATALIE SO

ERNST & YOUNG

I joined EY as an intern in the financial risk advisory department. I participated in a project related to interest rate risk in the banking book, which was tasked with helping a client develop statistical behavioural models using the SAS platform to estimate parameters such as the monthly prepayment rate and early withdrawal rate. I was assigned to handle a variety of tasks. For example, I assisted in model development learning on the SAS platform and VBA programming. I had the opportunity to pitch our models to our client, which improved my presentation skills. In short, I think the internship experience at EY was very good.

INTERNSHIPS

The internship programme allows students to acquire on-the-job training with the participating companies. Internships provide valuable opportunities for students to gain exposure to the professional environment, outside the classroom. QFRM students on average complete 3 internships prior to graduation. Over 90% have done at least one internship in a finance-related institution. The internship possibilities can lead to excellent career opportunities. Previous and existing internship partners:

- AIA
- Bain & Company
- Bank of America Merrill Lynch
- Bank of China
- Bank of East Asia
- Barclays Capital
- BNP Paribas
- CFA Institute
- CASH Algo
- Citibank
- Commerzbank
- Ernst & Young
- Eurex Frankfurt AG
- Goldman Sachs
- Hang Seng Bank
- HSBC
- HKEX
- Hong Kong Monetary Authority
- J.P. Morgan
- Morgan Stanley
- PwC
- Royal Bank of Scotland
- State Street Global Markets
- Standard Chartered Bank
- UBS Securities
- Western Asset Management Company

Quantitative Finance and Risk Management Science

Department of Finance, Faculty of Business Administration
Department of Statistics, Faculty of Science
this summer internship, I was able to figure out my interest in quantitative research and the powerful career service, I would never have gotten this internship in the first place. From coursework in QFRM provided a very solid foundation for me in this internship, including strong problem-solving skills. These skills allow interns like myself to navigate the financial markets with strategies. The QFRM programme provided me with comprehensive training in a range of areas including finance, mathematics, statistics, risk management and computer science. These skills allow interns like myself to navigate the financial markets with strong problem-solving skills.

Samanth Chiu  
Goldman Sachs

I joined Goldman Sachs as a controllers intern in the finance division. We work closely with the firm’s businesses to ensure that our profitability is accurately measured and reported, whether the reports are for internal management or external investors. My training in QFRM prepared me to understand the basic business aspects of the firm’s products and to make sense of the increasingly sophisticated measures applied to safeguard the firm and mitigate risks on our capital. My supervisors gave me the best advice I’ve ever received, namely to connect with lots of people and be prepared to ask the right questions.

Alex Tsao  
PwC

My internship at PwC gave me the chance to put into practice everything I had learnt from the QFRM syllabus. During the 4-month internship, I acquired even more knowledge, not only from the tasks I was assigned, but also from my manager and my colleagues. Consulting roles start in the office with peers. Outside the company, it is called consulting, but within the walls of PwC, it is called communication and collaboration – the two most important components to working with others and the most precious skills I took away from this internship.

Hinson Ho  
Commerzbank and Bank of America Merrill Lynch

The days I have spent in the QFRM programme have been hugely rewarding. The breadth and depth of the curriculum have allowed me to develop a solid foundation and suitable skill sets needed for my future career. I was previously employed by Commerzbank AG as an intern on the DCM Loans Team. My main responsibilities were to conduct market research in the APAC region and facilitate my team along the loan syndication process. Moving on, I will spend my summer at the Bank of America Merrill Lynch with the Wholesale Credit Team. Thanks to the QFRM programme, I was able to apply my knowledge and understand the statistical methodology of credit assessment and the hedging strategies our bank provides to our corporate and FI clients.

Raymond Chan  
BNP Paribas

I spent a year working with the Stock Flow Option Trading Team at BNP Paribas, where I shared in a wide variety of tasks to support daily trading activities. For example, we had to monitor our positions and hedges according to market environments, check and remark parameters for option pricing to catch market sentiment and back-test trading strategies. The QFRM programme provided me with comprehensive training in a range of areas including finance, mathematics, statistics, risk management and computer science. These skills allow interns like myself to navigate the financial markets with strong problem-solving skills.

Amy Yang  
Western Asset, California, USA

This summer I worked as a summer intern in the risk management department of Western Asset Management Company in California. My responsibilities were to provide research and analysis to assess portfolio security and to determine trade allocation parameters. The coursework in QFRM provided a very solid foundation for me in this internship, including programming skills and a good understanding of the financial market. Without QFRM’s powerful career service, I would never have gotten this internship in the first place. From this summer internship, I was able to figure out my interest in quantitative research and the next direction of my future path.

Charles Tsui  
J.P. Morgan and Jane Street

Being a trader has always seemed like a desirable job to many people, including me. I am grateful for having had a chance to work at JPMorgan as a Global Markets Intern doing equities facilitation trading, which aims to provide liquidity for hedge fund clients to trade in bigger lots. I also had the chance to intern for Jane Street as its Quantitative Trading Intern and to seek trading opportunities through mathematical models. The experiences I gained from these two internships were quite different, but having a solid foundation in finance and statistics knowledge helped me to a lot to nail these opportunities. QFRM was exactly the programme to equip me with the relevant skill sets I need and direct me into the industry.

Sam Ng  
UBS

Studying the QFRM programme at CUHK has been the most rewarding and fruitful journey of my life. There are so many opportunities in this programme, which can pave the best way for personal and career development. I didn’t take economics or accounting electives in high school, but here you study, work and compete with the most talented students, and that motivates you to grow. I was glad to join UBS as their operations intern during my penultimate year because I met many great mentors there and explored how investment banking works. With support from both the business and science schools, I will go on to work as a graduate trader for the China International Capital Corporation.

Han Xu  
Bank of America Merrill Lynch

Looking back now, choosing QFRM was a wise decision. This programme offers the unique advantage of bringing qualitative and quantitative knowledge together and lends us full support for career development. I worked as a gap-year intern with the China Economics Team at Bank of America Merrill Lynch in 2016-17. My duties were to assist in day-to-day research, including but not limited to model development, data commentaries, policy commentaries, etc. It was truly an insightful experience that not only showed me what a day was like as a sell-side researcher, but also empowered me with practical knowledge that was not taught in depth in class.

Kinson Chan  
State Street Global Markets

I spent most of my time learning about FX trading and Macro Strategy when I Underwent my 6-month internship at State Street Global Markets, an internship that granted me exposure to the real world of business. This was a lot different than a summer internship in which hypothetical case studies are assigned; instead, I was actually assisting the traders in building monitoring tools to help them trade. The financial knowledge and the quantitative skills I gained from QFRM certainly equipped me to excel in these duties. I believe this is the edge that the QFRM student enjoys; you have the flexibility to get exposure to both sides, and this has proven to be extremely beneficial.

Peter Xi  
CASH Algo

Interning in CASH Algo would be a thrilling experience for anyone who is interested in algorithm trading. As an intern, I was responsible for researching and developing profitable trading algorithms, and I assisted in updating and maintaining the risk management system. My duties challenged my knowledge of financial products and risk management, my abilities to conduct quantitative analysis and my information technology skills like computer programming. These are all things that would be learned and researched by a QFRM student. Facing an era in which quantitative methods and technologies have become increasingly significant in finance and risk management, I believe that QFRM is not only a programme that teaches but also a torch that shows the way, leading to the future of this industry.
situations, but also developed relationships with other interns, colleagues and mentors.

With the two rotations at different desks (Electronic Execution and the Delta One trading desk), I not only gained diverse knowledge regarding different asset classes and market portfolio performance. I believe that QFRM students receive a distinctive advantage in complex credit risk modelling. This deeper understanding of the industry practices in risk management has surely helped to pave the way for my career in risk management.

Heman Leung
Ernst & Yong and Hong Kong Monetary Authority

It is gratifying to be a member of the QFRM family and to participate in this fast-moving, competitive industry. The previous summer, I worked with Ernst & Young Risk Advisory. Although I felt very nervous before starting this first internship, my supervisor, Wilson, was very friendly and provided a lot of support. As a fellow graduate of QFRM, he gave me a great deal of advice regarding my future development. Therefore, although the statistical work involved was new to me, I was able to quickly learn the skills involved and build on the solid training I had received before.

This summer, I am working with HKMA Economic Research. Coincidentally, my supervisor, Simon, is a graduate of RM. With his guidance, I am exploring the challenging world of econometrics, which requires strong economic sense and quantitative skills. This will be a highly useful experience for me in the future.

Sherine Yeow
Citi Private Bank

The exposure provided to me by both the Faculties of Business and Science has been unique and invaluable. QFRM equipped me with solid analytical and interpersonal skills, both of which are equally important in the private banking industry. During my internship, the combination of courses in finance and risk management laid a good foundation for me to study the market movements and reactions that affect clients’ portfolio performance. I believe that QFRM students receive a distinctive advantage in the workplace by gaining a well-rounded mindset.

Ray Li
Citi Global Markets

The 10-week internship in Citi Global Markets was an extremely fruitful experience for me. With the two rotations at different desks (Electronic Execution and the Delta One trading desk), I not only gained diverse knowledge regarding different asset classes and market situations, but also developed relationships with other interns, colleagues and mentors that are important for my future career. The QFRM programme helped me to build up a solid foundation in statistics, mathematics and business that allowed me to successfully handle the price impact modelling project during my first rotation. In addition, the programme’s strong alumni network helped me to expand my contacts at Citi in a much more efficient way.

EXTRA-CURRICULAR ACTIVITIES

QFRM students are also actively engaged in student activities, voluntary services and international competitions to broaden their horizons.

Hinz Shum
National Best Team, International Quant Championship

The International Quant Championship is a quantitative trading competition that stimulates the participants’ skills in identifying trading signals. This competition attracts PhD, Master’s and Undergraduate candidates from prestigious universities all over the world. The participants are asked to identify the best weights of stock allocation, based on various kinds of data including company fundamentals, price movements or industry sentiments. Various statistical techniques including regression analysis and time series analysis are applied, in conjunction with overall knowledge in finance, mathematics and computer science.

I joined a team with three other CUHK students, whose fields of study were statistics, mathematics and computer science. With the joint effort of all three team members, we successfully advanced to the regional final and won the championship.

Giselle Yu
1st Runner-up, Peak Time Case Competition 2017

Together with Colin, Willkins and Joyce, I participated in Peak Time 2017, an annual international business case competition held by the Stockholm School of Economics in Riga, Latvia. After competing in the preliminary rounds, the 20 top teams from 18 different countries were invited to join the final events in Riga. Our first task was to maximise the share price of a phone manufacturing company in a business simulation game. Then, we were asked to solve a business case in 4 hours. This case competition is an excellent platform for business students to apply book knowledge to a real scenario. We were also able to polish our team collaboration skills and presentation techniques.

Peak Time is more than just a competition; it is also a golden chance for participants to know more about Latvia and other countries. In the Riga sightseeing tour and cultural evening gathering, we learned about Latvian history and other countries’ cultures by chatting with other finalists and tasting their traditional snacks.
**Career Planning and Development**

The QFRM programme offers individual and group career coaching, training and advice. A number of career training workshops covering all aspects of the job-hunting process will be held in the first semester and early in the second semester. These equip students with a complete set of skills, from the identification of leads to CV writing, interview skills and job-hunting strategies and techniques. There will also be practical coaching and drilling, such as mock interviews, sharing sessions with alumni, mentorship and buddy programmes, etc.

Students are strongly encouraged to take part in these career activities early on in their studies, to gain a clear picture and a good understanding of the expectations and challenges of finding a job or an internship.

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**Finance Trading Laboratory**

QFRM students have access to high-end workstations at the computer laboratories of the Department of Finance and the Department of Statistics. The Finance Trading Laboratory, with 53 desks, is among the best of its kind on a university campus. The Laboratory is equipped with Bloomberg and Thomson Reuters terminals and is supported by unparalleled real time data feeds from major exchanges around the world including the New York Stock Exchange (NYSE), Hong Kong Stock Exchange (HKEX) and Eurex, one of the world’s leading derivatives exchanges.

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**CFA Institute® University Affiliation Program**

The QFRM Program at CUHK Business School is affiliated with the CFA Institute® University Affiliation Program. This affiliation certifies that our curriculum is well-suited to prepare students for CFA examinations and eventual employment in the finance and investment industry.

Our program covers 70 percent of Level I topics under the CFA Program Candidate Body of Knowledge and CFA Institute ethical and professional standards. As a QFRM student, you are entitled to CFA Institute curricula, exclusive online Level I sample examinations, journals, webcasts and other educational resources. You are also eligible to apply for Level I CFA examination scholarships.
Alumni Sharing

Further Studies

MICHAEL CHAU
PhD in MATHEMATICAL FINANCE, IMPERIAL COLLEGE LONDON

The QFRM programme has equipped me with solid theoretical knowledge of the quantitative methods and statistical tools used in finance. The experience gained during my half-year of exchange study at Uppsala University, Sweden, is valuable in my future studies, especially my summer internship at the Royal Bank of Scotland which enhanced my understanding of market risk management from the practitioner’s point of view. After completing my undergraduate degree, I chose to pursue a Master’s degree in risk management science at CUHK. The guidance and training offered by the Department of Statistics has enabled me to produce two original research papers for consideration in top-tier academic journals in the field of stochastic control and optimisation with application to operations research and finance. With this solid background in mathematical finance, I completed a joint PhD at Imperial College London in 2012. I am now working in Quantitative Strategies in Credit Suisse London, supporting structured credit desk. My duties include developing valuation models for product pricing and risk calculating using PDE and Monte Carlo methods.

BRIAN LING
PhD in STATISTICS, COLUMBIA UNIVERSITY

The QFRM programme has a well-structured curriculum, which has equipped me with solid, practical knowledge of statistical methodologies and quantitative tools that are vital for my further studies. The valuable exchange study in the University of Toronto, Canada also broadened my horizons and gave me the experience of studying in a foreign country. As an undergraduate, I was also given the opportunity to be a research assistant under the supervision of Professor Wong Ho Ying, and was a summer intern in the financial services risk management department at Ernst & Young. I therefore experienced both the academic research life and the business of risk management from the practitioner’s point of view. After graduating, I chose to pursue a Master of Philosophy degree in Risk Management Science at CUHK. The guidance and rigorous training I was given while studying for my Master’s helped me produce two original research papers in the field of statistics, which I submitted for consideration to top-tier academic journals. I am currently studying for my PhD in Statistics at Columbia University.

ASHLEY SHEN
PhD in FINANCE, WHARTON SCHOOL, UNIVERSITY OF PENNSYLVANIA

My name is Lin (Ashley) Shen. I spent four treasured years at the Chinese University of Hong Kong (CUHK) and received my BSc in Quantitative Finance and Risk Management Science (QFRM) in 2013. Currently, I am working on my PhD in Finance at the Wharton School of the University of Pennsylvania. The QFRM programme at CUHK provides students with training and resources in both the Business School and the Faculty of Science, which gives us great advantages when applying for jobs and graduate schools. In my case, I participated in the exchange programme with the Wharton School and took two finance PhD courses in the CUHK Business School. These experiences and all of the quantitative training that I received at the Faculty of Science have turned out to be very helpful to my PhD coursework and research.

LESTER CHAN
PhD in ECONOMICS, BOSTON UNIVERSITY

The QFRM programme offered me comprehensive academic training and equipped me with solid theoretical knowledge and practical quantitative tools, which are essential to my future studies. The valuable exchange experience at the University of Toronto also broadened my horizons and prepared me to further my studies overseas. As an undergraduate, I was a summer intern in the consumer credit risk management (secured) department at the China Construction Bank (Asia), where I learned more about risk management through actual practical experience. After graduating, I embarked on a Master of Philosophy degree in Economics at CUHK. The knowledge I acquired from the QFRM programme turned out to be very useful in the study of economics, and particularly important in research studies. I am currently pursuing a PhD in Economics at Boston University.

Career Prospects

LORRAINE ZHAO
GOLDMAN SACHS

During my time at university, I treasured the chances available to go outside Hong Kong and explore the world. In my first year, I visited Scotland and attended an English Enhancement Course at the University of Edinburgh. Over the second summer holiday, I took part in an exchange programme with students at Tsinghua University. Both of these exchange experiences enabled me to better understand the wider world and cultivate a mind-set that embraces different cultures and values. This is essential to prepare me for work in an international company. In addition, I gained valuable experience in my last internship. Working with supervisors who had different styles taught me how to adapt to various working styles and how to prioritise tasks when schedules are tight. In job interviews I was frequently asked how I worked under pressure, and my internship experience provided valuable lessons regarding this. As a QFRM alumna, I am very grateful of having joined the programme and learned technical skills and life values. The rich resources provided by the university have enabled me to aim higher in planning my future after graduation.

SAMUEL CHIU
GOLDMAN SACHS

The QFRM programme allowed me to explore a myriad of opportunities. With the full support of both departments, we were exposed to a broad spectrum of career options, including internships and job-seeking workshops. Rigid quantitative training equipped us with foundational knowledge of the financial markets and the field of risk management. The course structure allowed us to broaden our horizons through an overseas exchange programme, which gave us a great chance to meet new friends and gain new perspectives. I am very grateful for the support from the programme and am honoured to be part of the QFRM community.

JONATHAN KWOK
J.P. MORGAN

QFRM is the best programme for building practical knowledge combined with solid quantitative skills. Along with strong career support and cross-faculty benefits, I have made a number of long-lasting friends who are all quite intelligent and supportive. Three of us, including me, joined J.P. Morgan as summer interns in its Risk Management division. By applying our classroom knowledge to reality, all of us have grown significantly, and I was lucky enough to secure a full-time position. Beyond my studies, I went on two exchanges: UC Berkeley in California and Sciences Po in France. By seizing these chances, I’ve left my footprints in over 20 countries. Isn’t it amazing?

KELVIN NG
DEUTSCHE BANK

Having been a QFRM student for four years in my university life, I am glad to say that I have achieved more than I expected. Throughout my university life as a QFRM student, I joined one exchange programme, completed a few internships and absorbed useful knowledge and skills in finance and risk management. My overseas exchange experience was a rewarding one. It was an unforgettable journey and encouraged me to step out of my comfort zone. With the support of our department, I was also able to complete a few internships, which provided insights into the industry. Finally, the demanding yet rewarding courses in QFRM provided us with a solid theoretical background and practical applications to the business world. I would say the programme is one of the best programmes for students aiming for a career in finance and the risk management industry.
The QFRM programme is an intensive course of study that offers solid knowledge in accounting, portfolio management, financial theory, programming and various statistical techniques. All of these studies have given me a greater understanding of and insight into the finance industry. In this programme, I’ve acquired highly useful knowledge concerning the classic Black Scholes Merton Pricing Model, Machine Learning, FinTech and various other hot topics in the industry. During my studies, with help from the programme office, I joined in various case competitions, became an exchange student at a prestigious university in Canada and connected with various industry practitioners. All of these experiences have broadened my horizon, enriched my university life and made me better prepared to join the industry.

In QFRM, you can always find helpful programme directors, career advisors and supportive staff. More importantly, you can always find a group of friends with common interests who are aiming for the same goal.

**Robin Zhao**  
Deutsche Bank

My university life can be summarised by several keywords: QFRM, friends and hostel, exchange, internship and fun. As business foundation students at CUHK, we are free to decide on our major in our second year. QFRM is definitely a good choice compared with other programmes, with its combination of finance courses and other quantitative mathematical and statistical courses that prepare students for a broad range of opportunities.

I spent my five university years at New Asia College and lived in Chih Hsing Hall, which is a great hostel with an excellent view and friendly staff, and I have also met some of my best friends here.

QFRM students enjoy a distinctive advantage in exchange opportunities, as we are eligible to apply for the exchange programmes offered by both the Business Faculty and the Science Faculty.

QFRM students can also take advantage of career guidance services from both the QFIN and the RMSC programmes and receive more information about internship and graduate jobs.

**Ken Yuen**  
Morgan Stanley

The QFRM programme has given me one of the best experiences in my life, and has helped me to develop my friendships, career, knowledge, and professional network. The programme was designed to equip students with both comprehensive business sense and in-depth technical knowledge, both of which are essential in the investment banking industry. Due to the programme’s cross-faculty support, we enjoyed very strong career guidance, comprehensive academic support and additional exchange opportunities. All of these things contributed to giving me a highly valuable and eye-opening exchange experience with the University of Warwick. This set of experiences helped me land the internship and subsequently a full-time job offer from the Derivative Trading desk for Morgan Stanley.

**Dickson Yip**  
Hong Kong Monetary Authority

It is my pleasure to be a student in the QFRM programme, where I have received rigorous training in quantitative skills and technical knowledge, participated in a yearlong exchange programme in the US and worked with several companies as an intern. Throughout my four-year study programme, I have received tremendous support from my home departments – not just academic support, but also career and personal development advice.

QFRM is more than just an academic programme. It is a platform that has connected me, a student, to the greater society. Being part of the working class now, I am very grateful that I have been well trained in the technical knowledge of finance and the soft skills required in the workplace. Looking back at myself when I just started college, I still cannot believe how much I have grown under the guidance of the QFRM programme.

**Henry Lin**  
Credit Agricole CIB

The QFRM programme is an interdisciplinary programme that has equipped me with strong numerical acumen and solid financial knowledge. The curriculum is perfectly balanced between theory and real-life application, and it paves the way for prosperous careers in sales and trading, investment banking, investment management and many other fields. During my senior year, I went for a semester exchange to UC Berkeley, where I rekindled my passion for statistics and finance by meeting various scholars from around the world. After spending a summer at Wells Fargo Securities, I started working full time at the credit trading desk. Nothing beats the intensity and adrenaline of the fast-paced market!

**Ryan Liu**  
Wells Fargo

QFRM is an interdisciplinary programme that has equipped me with strong numerical acumen and solid financial knowledge. The curriculum is perfectly balanced between theory and real-life application, and it paves the way for prosperous careers in sales and trading, investment banking, investment management and many other fields. During my senior year, I went for a semester exchange to UC Berkeley, where I rekindled my passion for statistics and finance by meeting various scholars from around the world. After spending a summer at Wells Fargo Securities, I started working full time at the credit trading desk. Nothing beats the intensity and adrenaline of the fast-paced market!

**Wai Li Teng**  
Ocean Global Capital Management

As an international student, I have found CUHK a comfortable home throughout my fruitful university experience. It is certainly safe to say that the university has much more to offer than just academic excellence. From my part-time barista job in my freshman year to an overseas exchange programme in the Netherlands, I found that CUHK was always there to provide a wide array of opportunities, with an emphasis on promoting whole-person development. Furthermore, having enrolled in the QFRM programme, I was excited to learn not only pure theory but also hard skills to leverage my knowledge in real-life situations. This kind of real support is, in my honest opinion, the principal aspect that gives CUHK students the edge in career advancement.

**Ruby Hui**  
Ernst & Young

My 4 years studying in the QFRM programme left a lasting impression. The coursework was demanding and challenging, but it equipped me with the necessary finance, statistics and risk management knowledge, and all-important programming skills. The curriculum prepared me well to pass the Financial Risk Manager (FRM) examination, a leading worldwide certification for risk management. During the course, I completed internships at a securities firm, HKMA and Ernst & Young. I also went on a semester exchange to Singapore. These experiences enriched my university life. After graduating, I secured a job in credit risk management advice at Ernst & Young. My current duties include coding for interest rate risk impact calculations and writing key deliverables for clients. What I learnt in the QFRM has helped me excel in my job.
ACHIEVEMENTS

GORDON HO

SILVER MEDAL FOR THE BRIDGE EVENT AT ASIAN GAMES 2018

It was one of the greatest moments of my life to stand on the podium and receive the silver medal for the bridge event at the Asian Games 2018. There were many media reports about our success, but few people realised how hard our journey was.

Ten teams competed in the Supermix series, including China, whose team consisted of 6 world champions; host country Indonesia, whose team comprised professional players; and rising stars Chinese Taipei, whose team consisted of recent Asia Cup Champions members. The qualifying round was a round robin against all nine of the other teams. The top four teams entered the knockout stage. We did not have a great start and were in a slightly below-average position throughout the tournament. Believe it or not, with two rounds remaining, we were still in seventh position, and even the reporters said only a miracle could get us into the knockout stage. Yet we did not give up and played extremely well in the last two rounds to score almost the maximum (37 out of 40 vp) to obtain fourth place by a margin of 0.2 vp. None of our Hong Kong bridge friends could believe it and congratulated us for our unbelievable performance.

In the semi-final, we played a 48-board match divided into three rounds against the number one seed, Chinese Taipei. Once again, we exhibited a very high team spirit at the table to maintain only a small margin, 58:66, behind the top seeded team in the first two rounds. In the last round, we followed our coach’s advice “to fight to the end”. When our opponents were exhausted after a long match, we overcame the early deficit and gained the lead by 104:92 and won the match. I will never forget the moment when my captain and teammates ran over to us for a group hug. That moment felt like we had scored a last-minute penalty in the world cup and everyone was cheering for us.

Recently my friends have asked me why bridge should be listed as a sport in the Asian Games. I can now proudly tell them that bridge is no different from other sports – not only do you have to keep practising to improve, but your mentality, physical state, concentration and luck also contribute to your success. I would like everyone to appreciate the spirit of every athlete.

Silver Medal for the Bridge Event at Asian Games 2018

Gordon Ho

BOSCO LAM

HONG KONG EXCHANGES AND CLEARING LIMITED

The QFRM programme is an all-round curriculum that provided all of the necessary skills and opportunities for me to explore the financial industry. I received rigorous financial and mathematical training through lectures and projects during my 4-year study. Meanwhile, I participated in various trading competitions, case competitions and internships, which allowed me to put my programming skills and the financial theories I learnt to use. Working at HKEX is highly dynamic, especially with its growing business opportunities and its mission to shape market development. It is a place where you meet professionals from all over the world and work on the cutting edge of the financial market.

RAY LI

CITIGROUP

My undergraduate QFRM studies were challenging yet inspirational and extremely fruitful, largely thanks to the supportive faculty and well-structured curriculum design. The finance and statistics courses equipped me with the essential knowledge needed to find internships and graduate jobs, and the wide-reaching alumni network of the programme and the wider business school enabled me to start making contacts in the field even before I joined the industry and kept me up to date with the fast-changing financial world. Moreover, with the support of CUHK, my exchange to the United Kingdom was an eye-opening experience for me.

CHEUNG FUK SHING

BLACKROCK

My three-month summer internship experience in one of the largest asset management companies, BlackRock, was extremely enriching and provided me with practical experience in the financial markets. Working with other experienced traders in the iShares Capital Markets team, I was responsible for monitoring flows of ETF and presenting them to the management board. I also wrote pitching reports explaining investment opportunities to clients, and illustrating trading strategies. The internship helped me understand more about passive investment, and gave me further insight that will assist my career development in asset management business.

The QFRM programme provided me with good, solid knowledge in both finance and statistics, and gave me many opportunities to experience things like case competitions and exchanges to enhance my soft skills. I am proud to be a QFRM student.

FELIX CHAN

MICROSOFT

QFRM provides the best environment for students to grow because you can learn from both Business and Statistics perspectives. I had several internships in commercial and public sectors, thanks to the training and guidance I got from the departments. Besides academic and working experiences, studying abroad will definitely help prepare you for future challenges. I went to the University of St. Gallen for exchange and went backpacking in several European cities. However, I was not satisfied with doing the same thing after my graduation. I tried to be different and all these track records paved the way for my work at Microsoft, a global software company.