



香港中文大學
THE CHINESE UNIVERSITY OF HONG KONG

風險管理科學課程

Risk Management Science programme



Li, Ka Leung (BSc in RMS 2003; MPhil in RMS 2005; FRM)
Assistant Manager Credit Analytics,
Credit Risk Management, HSBC

"In this volatile financial market, risk management is crucial for any financial institution, especially for a bank. I am very happy that I can apply my knowledge to participate in managing the bank's credit portfolios. Statistical estimation and financial modeling techniques learnt in these five years are extremely important to my works. I sincerely believe that it is worthwhile to devote to this program."



Angel Leung (BSc in RMS 2008)
APAC Business Process Improvement,
BNP Paribas Hong Kong

"Majoring in risk management science exposes me to a broad spectrum of academics, including statistics, finance, economics and computer science. These all integrate to equip me with analytical thinking and technical skills which are relevant to participate in the industry. Also, I am glad to be nominated and join the internship programme in Hong Kong Monetary Authority in 2006. Exhaustive opportunities offered also facilitate us to acquire real-life experience and to consolidate our classroom learning. If you are eager to take up challenges and desire to be the future leader of the dynamic financial marketplace, then risk management science would surely be your sole choice."



Mathew Wong (BSc in RMS 2005; MPhil in RMS 2007)
Statistician,
Census and Statistics Department, HKSAR

During my three-year undergraduate and two-year postgraduate studies, I took courses about market risk management, credit risk modeling, investment tools and analysis, derivatives pricing, econometrics, management, computer programming, data analysis, and applied business statistics. Through the well-designed and comprehensive training programmes, I develop a solid academic background and possess essential analytical skills to tackle real-world problems in a holistic business-oriented fashion.

Apart from my educational qualification, I joined the summer internship programmes at HSBC Group and Morgan Stanley Capital International Barra. I met many talented people and worked with a great team. It gave me an excellent insight into a career in research. It was a fantastic opportunity to decide which area I would be most suited to long term and what skills would be most important to my role. I find myself enjoying successfully applying my quantitative skills in a real-life scenario.



Cleo Leong (BSc in RMS 2004, MPhil in RMS 2006)
Senior Quantitative Analyst,
Penjing Asset Management Limited

"Over years of evolution, RMS has become one of the popular choices among university entrants.

We all face risks in our everyday life. Through the theoretical study and real example analysis, students can understand how to manage risks effectively. RMS is not only a subject that teaches students to work out, but also how to express the possible situation and propose the appropriate solution to those related. Risk management is perfect for those having analytical mind and superb communication skill. Every part of the society needs risk professionals. If you are smart, flexible and well-spoken, welcome to join us!"

Michael Mak (MSc in RMS 2006),
Deputy General Manager and Head of Risk Management Division,
Wing Hang Bank Limited

"The implementation of Basel II in banking and the ever growing popularity of complex structured treasury and credit products in the financial market have raised the demand for people with strong quantitative risk management skills. The Chinese University of Hong Kong's Risk management Science program is a well structured and very practical program to meet such demand. It provides the concept, methodologies and up-to-date skills in quantitative risk management which will definitely enhance your competence for solving problems in pricing and hedging structured treasury and credit products, credit risk modeling in Basel II and a lot of contemporary risk management areas. I have benefited substantially from the MSc program and would highly recommend it to those people who are interested in pursuing their career in increasingly important risk management."



Esther Tsang (BSc in RMS 2006)
Associate in Global Markets, HSBC New York

"After graduating from Risk Management Science program in 2006, I further my study in master degree in risk and stochastic at the London School of Economics. I am now working as a global analyst in Global Markets at HSBC and am having my first global rotation in Global Fund Structured Product team in New York office. I find the quantitative and analytical skills equipped in the program very useful to my job in investment bank, thanks to the well-balanced combination of finance, mathematics, statistics and programming courses. Plus, the exchange program to Sweden in 2004 allows me to develop as an all-round person. Throughout my study in risk management science, the greatest asset I gained is the interaction with world-renowned professors and I have to say it is a great place to discuss, exchange ideas and get support."

General Enquiries:

Risk Management Science programme 風險管理科學課程

Tel. 電話 : (852) 2609 7931

Fax 傳真 : (852) 2603 5188

Email 電郵 : statdept@cuhk.edu.hk

Website 網址 : <http://www.sta.cuhk.edu.hk/Dept/rmsprg.htm>

理學院

Faculty of Science



Introduction to the Risk Management Science programme

Financial crises during the late 1990s have stimulated not only public interest in risk management, but also their awareness of its importance in today's investment environment. A good understanding of risk management is vital to many companies. Risk management Science (RMS) is a highly quantified, scientific and methodological subject. This programme is designed to fulfill the growing demand of expertise in this area.

A successful risk management system incorporates expert knowledge from mathematics, statistics, actuarial science, finance, computing and engineering. This synergy of interdisciplinary knowledge distinguishes risk management from a traditional subject. The RMS programme in the Department of Statistics of the Chinese University of Hong Kong (CUHK) plays a leading role in developing the risk management discipline in Hong Kong. This highly successful Bachelor degree program in RMS was launched in 2000. The programme combines theories with applications to provide trainings to people interested in enterprising in risk management discipline. Postgraduate programmes leading to M.Phil and M.Sc. degrees are also offered to students who intend to become experts in the field.

Undergraduate Admission Requirements (HKALE requirements)

Applicants should satisfy the basic requirement of the University and the following additional requirements:

1. Grade E or above in AL pure mathematics, and
2. Grade E or above in one AL science subjects, AL economics or one AL business subject, or Grade E or above in two AS science subjects.

Career Prospects

While some of our graduates have continued their study and pursued a high degree in Hong Kong and overseas, most have joined the work force after graduation. Almost all of them are working in the banking, financial or insurance industries. Possible positions are accounting officer, actuarial officer, market risk analyst, market risk officer, financial analyst, credit risk officer, assistant risk manager, quantitative analyst and others, in major banks, investment banks, security houses, insurance companies and big 4 accounting firms.

Summer Internship

This programme reflects our continued effort to enhance working experience of RMS students through summer internship or other internship opportunities. In the past several years, the programme successfully offers our students summer internship in banks, insurance companies and public organizations.

Courses

Required Courses

Code	Title
■ ACY 1111	Introductory Financial Accounting
■ CSC 1110	Introduction to Computing
Or CSC 1510	Computer Principles and Programming
Or CSC 1520	Computer Principles and C++ Programming
Or CSC 1530	Computer Principles and JAVA Programming
Or CSC 1580	Visual Programming
■ DSE 1030	Economics for Business Studies I
■ FIN 2010	Financial Management
■ FIN 3080	Investment Analysis and Portfolio Management
■ MAT 2010	Advanced Calculus I
■ MAT 2310	Linear Algebra and Applications
■ RMS 2001	Introduction to Risk Management
■ RMS 2101	Special Topics in Risk Management I
■ RMS 3101	Special Topics in Risk Management II
■ RMS 4001	Simulation Methods for Risk Management Science and Finance
■ RMS 4003	Statistical Modeling in Financial Markets
■ RMS 4101	Special Topics in Risk Management III
■ STA 2001	Basic Concepts in Statistics and Probability I
■ STA 2006	Basic Concepts in Statistics and Probability II
■ STA 3007	Applied Probability
■ STA 3008	Applied Regression Analysis

Words from Alumni



Kaly Fong (BSc in RMS 2009)
Equity Analyst, MSCI Barra Limited

"Risk management is becoming more important these days. How can we know more about risk management and even develop to be a professional in this field?"

Studying risk management science would be a good starting point. Risk management science program provides us with a series of comprehensive trainings, which include risk management, statistics, finance, mathematics and computer programming. All these help us to build up a solid financial background. Besides, the study environment here gives us opportunities to improve presentation and communication skills. Through the 3-year RMS program, our hard skills as well as soft skills are progressed.

It was difficult for a fresh graduate to find a job because of the depressed economic condition in 2009. But thanks for the well-balanced trainings provided by RMS, I was able to obtain an offer from MSCI Barra, and continue to develop my career in financial industry."

Timothy Choi (BSc in RMS 2002, MPhil in RMS 2004, FRM)
Market Risk Manager
DBS Hong Kong



"The Risk Management Science Program utilizes lectures, applications and presentations to deliver knowledge on various disciplines including statistics, computer science and financial risk management. The continuous developing curriculum equips students with invaluable concepts, skills and techniques essential to be a professional practitioner in today ever-changing financial industry."

Alex Li Lok Shun (BSc in RMS 2009)
Graduate Student of Oxford University



"The RMS program has a well-structured curriculum that will give students plenty of opportunities to enrich their skill-set and become a professional possessing both quantitative and qualitative aptitude.

After graduating from CUHK with a bachelor degree, I have decided to further consolidate my knowledge in the field of finance and economics with a master's degree. In September 2009, I will embark on a new adventure. I will be pursuing an MSc in Financial Economics at Oxford University, UK. I believe at Oxford there will be an even wider range of intelligent minds to encounter and more creative discussions to engage in.

The RMS program has given me a glimpse of this financial world through internships and research opportunities, and now I will build on that with my coming experience at Oxford."

Helen Li (BSc in RMS 2009)
Graduate Student of University of Chicago



"Unlike other programs, RMS requires us to acquire essential knowledge from different areas, including economics, finance, mathematics, statistics and computer science. It may be doubted by every second year RMS undergraduate that why we are still building up foundation knowledge set which seems unrelated with 'risk management'. In my point of view, all these courses train us to think critically and logically, which will surely benefit our whole life. Risk management, is a subject of science, as well as of art, which can not be rushed.

The RMS program and its faculty are highly recognized in top-ranking world-wide schools and institutes, which I realized in my graduate school application. Now I am doing my Master degree in the University of Chicago. It is amazing to me to find that courses I learnt in RMS program provide me a huge advantage in terms of quantitative method and scientific thinking even though my current program, public policy, sounds more like a social science subject. I am always proud to be an RMS graduate and I'm sure that this program has proven to be valuable no matter you choose to work or further study after graduation."

Elective Courses

Code	Title
■ CSC 2520	Data Structures and Applications
■ ECO 3420	Financial Economics
■ FIN 3010	Financial Markets
■ FIN 3210	Risk Management and Insurance
■ MAT 3210	Linear Programming
■ MAT 3220	Operations Research
■ MAT 3230	Numerical Analysis
■ MAT 3240	Numerical Methods for Differential Equations
■ MAT4210	Financial Mathematics
■ RMS 4002	Data Analysis in Finance and Risk Management Science
■ RMS 4004	Theory of Risk and Insurance
■ RMS 4005	Stochastic Calculus for Finance and Risk
■ RMS 4007	Risk Management with Derivatives Concepts
■ STA 3006	Statistical Computing
■ STA 4002	Multivariate Techniques with Business Applications
■ STA 4003	Statistical Inference
■ STA 4004	Actuarial Science
■ STA 4005	Time Series
■ STA 4006	Categorical Data Analysis
■ STA 4008	Survival Analysis