香港科技大學
THE HONG KONG UNIVERSITY OF
SCIENCE AND TECHNOLOGY

RMBI BSc in Risk Management
and Business Intelligence

LEVERAGE INTELLIGENCE MITIGATE RISK

BSc in Risk Management and Business Intelligence
理學士（風險管理及商業智能學）

RISK MANAGEMENT and BUSINESS INTELLIGENCE
Business & Management x Engineering x Science

BSC IN RISK MANAGEMENT AND BUSINESS INTELLIGENCE
理學士（風險管理及商業智能學）

ABOUT THE PROGRAM

The global business landscape is transforming faster than ever before, with complex economic, political, and technological forces introducing unprecedented opportunities and risks. HKUST's interdisciplinary BSc program in Risk Management and Business Intelligence (RMBI) responds to the demand for a new generation of analysts and innovators with a strong grasp of the interconnected factors that shape our world.

RMBI is the first integrated program of its kind, synergizing the leading expertise of HKUST's Schools of Business & Management, Engineering, and Science. The four-year degree embraces a dynamic and well-rounded approach, exposing students to a diverse curriculum as well as professional development and networking opportunities. With a focus on real-life applications and innovative thinking, RMBI program equips students with the knowledge and confidence to lead in an evolving and competitive market.

PROGRAM HIGHLIGHTS

Combining the world-class expertise of HKUST's Schools of Business & Management, Engineering, and Science, the cutting-edge RMBI program provides a curriculum that caters to the market needs with an emphasis on quantitative techniques and business knowledge:

- Understanding of risks in financial institutions and other firms, including market risks, credit risks, operational risks, and business risks in general

- Machine learning models and methods for assessing and minimizing risks

- Classic data / text mining methods and advanced machine learning technologies to analyze and manage the increasingly large volume of business data available for decision-making

CURRICULUM FEATURES

- Risk management principles and processes

- Quantitative techniques and methods for risk management and business intelligence, such as:

  - Statistical analysis and risk modeling

  - Simulation and optimization methods

  - Advanced principles and techniques of big data & data mining

  - Design and use of business intelligence systems

- Building and synthesizing statistical, mathematical, financial, and information system know-how to solve risk management problems

DUAL DEGREE 4+1 PATHWAY
(BSc RMBI + MSc FinTech)

The Dual Degree 4+1 pathway is the first of its kind in HKUST to streamline the education of Financial Technology talents and provides a vertical path for students to advance their study in FinTech.

Selected students would be able to complete both a Bachelor degree in RMBI and a Master degree in FinTech in 5 years. Students will start taking MSc Fintech core courses in UG Year 4, and be admitted to the MSc program as a full-time student in the following year (the 5th year). Students can transfer up to 14 surplus MSc credits taken during the UG study to fulfill the MSc program requirements. The tuition fee would be reduced through this pathway.

CAPSTONE PROJECTS

An in-depth study of a company-sponsored business case strengthens students' ability to apply knowledge of different areas in real-world situations, fosters creative and critical thinking, and develops project management skills.

BI Software

C++, Java, Python, R, Database Systems, SQL, Tableau, IT Project Management

Risk Modeling

What-if Analysis, Simulation & Optimization, Pricing Models, Value-at-Risk, Credit Scoring

BI Techniques & Methods

Data Visualization, Dashboard, Data Mining, Machine Learning, Natural Language Processing

Risk / BI Strategies

Data Governance, Digital Transformation, ESG, Predictive Analytics, Prescriptive Analytics

ENRICHMENT ACTIVITIES

>> Exchange

Students in RMBI can join the exchange programs offered by the Schools of Business & Management, Engineering, and Science in Year 3 Fall or Spring Term or Year 4 Fall Term, so as to enrich their global vision, social networks and interpersonal skills.

>> Symposium

The annual Symposium has been organized since 2009. It serves as a platform for experts and professionals to meet and exchange their views. It also offers for young adults to learn invaluable first-hand lessons on Risk Management and Business Intelligence.

Over the years, speakers from a wide range of industries were invited to highlight the event, including banks, insurance companies, technology companies, airlines, quasi-government organizations and others.

>> Mentorship Programs

RMBI's Mentorship Programs expand students' social networks and broaden their exposure, strengthen connections with peers, alumni and senior executives. Students are provided a source of advice for career development and personal aspirations.

In the past 10 years, we have received support from more than 60 organizations including Bank of China, Bloomberg, Morgan Stanley, Ernst & Young, etc., that send their directors, managers and senior staff to be our corporate mentors, who offer students insightful guide to the business environment, first-hand information of the job market, as well as personal career advice.

>> Internships

Internship is an invaluable exposure to the real-life business world which prepares for students' future career development. Our statistics shows that over 90% of RMBI students have taken at least one internship, and around 40% have taken at least two internships during their undergraduate study.

>> Seminars and Workshops

Speakers from academics, research experts and industrial professionals are invited to deliver talks and workshops to facilitate students in the acquisition of RMBI knowledge and foster their soft skills learnt from different perspectives. The topics are mostly related to the areas of RM and BI, which cover the research areas, career experience and the latest industrial trends.

>> Support for acquiring Professional Qualifications

Support and sponsorship for students to acquire professional qualifications are provided through courses and workshops, including Chartered Financial Analyst® (CFA) examination, Financial Risk Manager (FRM), and some other BI-related certificates.
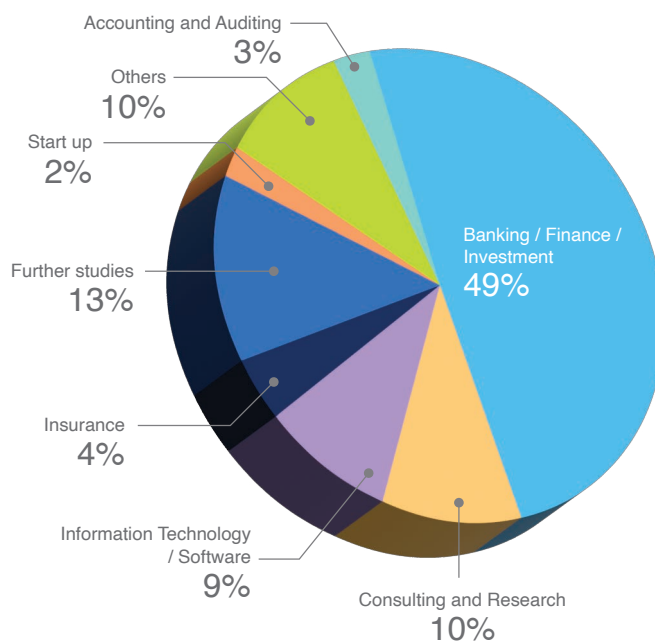
CAREER PROSPECTS

The RMBI program combines state-of-the-art knowledge with all-rounded development to give our students the competitive edge in the job market. Our graduates are employed by investment banks, commercial banks, insurance companies, consulting firms, and government agencies as well as many other types of well-known firms or organizations.

Our graduates have been employed at various well-known firms or organizations such as

- Alibaba Group
- Bank of America
- Bank of China (HK) Ltd
- Barclays
- Bloomberg L.P.
- BNP Paribas
- China International Capital Corporation Limited (CICC)
- Citibank Hong Kong
- DBS Bank
- Deloitte Touche Tohmatsu Hong Kong
- Deutsche Bank
- Ernst & Young Global Ltd
- Goldman Sachs
- Hang Seng Bank Ltd
- Hannover Re
- Hong Kong Jockey Club
- Jardine OneSolution (HK) Ltd
- J.P. Morgan
- McKinsey and Company
- Microsoft
- Morgan Stanley
- MTR Corporation Ltd
- Premialab
- Pricewaterhouse Coopers Consulting Hong Kong Ltd. (PwC)
- Royal Bank of Canada
- Société Générale
- Tencent Holdings Limited
- The Hongkong and Shanghai Banking Corporation Ltd (HSBC)

RMBI GRADUATES BY EMPLOYMENT SECTOR
(Class of 2017 - 2022)

- Accounting and Auditing 3%
- Others 10%
- Start up 2%
- Further studies 13%
- Insurance 4%
- Information Technology / Software 9%
- Banking / Finance / Investment 49%
- Consulting and Research 10%

ADMISSION INFORMATION

Application

Joint University Programmes Admissions System (JUPAS) Application

Prospective local mainstream secondary students may apply for RMBI program through JUPAS. Suitable candidates will be admitted directly to RMBI program (via Program-based Admission in Year 1) or through three schools in HKUST (via School-based Admission in Year 2).

Non-JUPAS Application

Interested students holding international qualifications, local sub-degree and post-secondary or other qualifications may apply for RMBI directly through the HKUST Online Application System.

Please visit **http://join.ust.hk/** for more information about application procedure and important dates.

Entry Requirements

Applicants who are good at Mathematics and interested in computing are suitable candidates for the RMBI program.

HKDSE Subject and Level Requirements					
English Language	Chinese Language	Mathematics (Compulsory)	Citizenship and Social Development	Elective 1	Elective 2
				M1/M2 can be accepted in place of an elective	
4	3	3	Attained	3	3

ALUMNI & STUDENT SHARING

Antti VIITALA (Class of 2018)

"The RMBI Capstone Project inspires me that work experience with real problems and real people is what helps drive a career in the long run!"

Before university, I did not know what 'consulting' meant, but learning about the job via classes and clubs instantly made me think it was something I wanted to pursue, mainly because of the variety of the work and the associated learning curve.

Working on different projects and changing topics, teams, and clients from time to time keeps things fresh. Our team did for Bloomberg was a good example of that. We learned a lot about project management, client engagement, and data analysis, all skills that I still use day-to-day as a technical consultant!

Vanessa CHAN (Class of 2021)

"The interdisciplinary of RMBI program builds up and strengthens my passion for innovation."

The determining factor that has attracted me to join RMBI is the interdisciplinary culture it holds. Currently, I am working in a FinTech company designing and developing financial modelling methodology in the FinTech industry after graduating from this one-of-a-kind program.

On top of the fundamental courses, the flexible curriculum allows me to further polish my skills in my areas of interest, where I focus on data management and machine learning. The most valuable one would be standing as the finalist in the Cyberport University Partnership Program, in which our team developed a mobile application, SIGMA, aiming to raise financial literacy by providing gamified financial education. This journey has always reminded me of everyone's strength and contribution.

Thomas CHAN (Class of 2022)

"RMBI is a program that goes beyond the academic training, with various enrichment activities provided to make students much more all-rounded individuals."

RMBI is a fascinating program that prepares you not only for a career in risk management but also in a variety of fields. One very few programs would allow its students to launch successful careers ranging from government administration to software engineering and management consulting.

I took a minor in social science, which lends itself well to the understanding of geopolitical risk. How to quantify risk is not the only thing that a good risk manager has to handle, but also how to interpret and manage it. Thus, I am of the view that a good risk manager should have a holistic education, which the RMBI program aptly provides.

Elle SUN (Class of 2023)

"RMBI helps me to unleash my potential and to connect endless possibilities, where my true passion lies."

RMBI allows me to build a solid foundation in finance and receive comprehensive training in quantitative tools. The wide spectrum of skillsets that learned from the courses holds me in good stead to get into and potentially succeed in the workplace. Knowing the language in both the investment and coding world, I participated in the development of an AI-backed robo-advisory product.

Plus, RMBI grants me access to abundant resources from the business, science, and engineering schools. Thanks to the various opportunities in case competitions, exchange programs, and research projects, I have been given the greatest flexibility to explore around and dive deep into the topic of choice.

Jorge YUNG (Class of 2021)

"RMBI program leads me to a pursuit of postgraduate study, with enriching exposure of statistics, mathematics and machine learning."

I am now doing an MSc in Statistical Science at the University of Oxford after graduation. The RMBI program was very enjoyable to me as it exposed me to statistics, mathematics and machine learning on a daily basis. The lectures and programming assignments sparked my interest in these fields, which inspired me to pursue my current Master degree. The valuable skills and knowledge that RMBI has equipped me with are still applicable to my studies now!

The one-year Capstone Project was the best part of my learning in RMBI since it enabled me to improve my literature reading and research skills, practise my coding skills and deepen my understanding of machine learning.

Charles WONG (Class of 2017)

"The essence of RMBI program lets me risk the fall and experience how it feels to fly, which greatly sharpens my leadership acumen."

I am a corporate strategist by day, and a contemporary art & cuisine lover by night. Like cookery, the RMBI curriculum is a comprehensive recipe that pairs financial acumen with cutting-edge technologies perfectly. It confers students with significant autonomy in tailoring academic success to our own needs and interests.

Throughout my undergraduate studies, international case competitions also played a pivotal role in developing my passion for solving impactful, complex problems with motivated, charismatic leaders from around the globe. From regrouping after defeats, teaming up with former competitors, to eventually winning the Global 2nd Runner-up for the APECS Leveraged Buyout Case Competition in Singapore, this chapter of life has always brought about fond memories when being reflected upon.

Contact Us

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