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CUHK  
BUSINESS SCHOOL

# BBA in Insurance, Financial and Actuarial Analysis



# Insurance, Financial and Actuarial Analysis (IFAA)

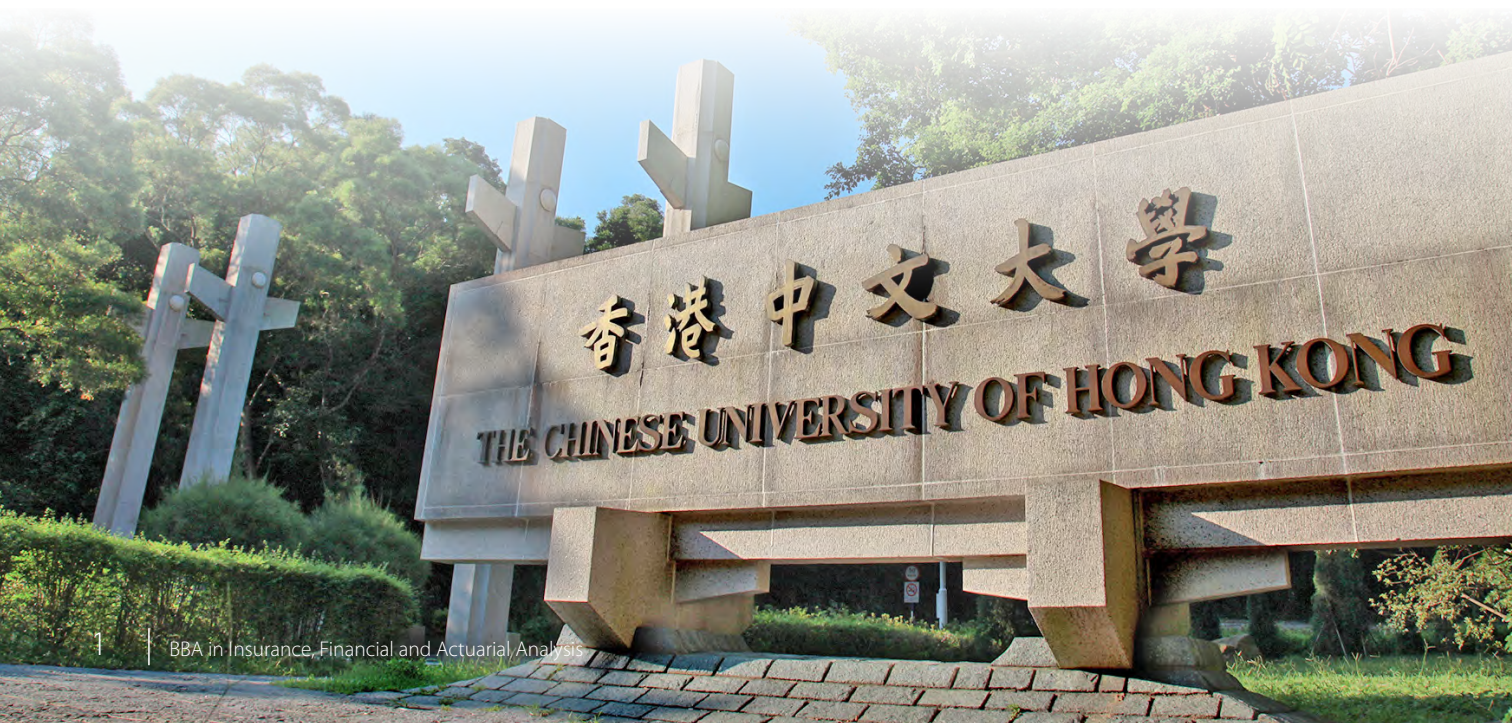
Novel investment and insurance products make stability vital in the modern financial security system. The ever-progressing field of actuarial science is a major contributor to this stability. Insurance experts today are skilled mathematicians who apply their knowledge to business in new ways, effectively managing the risk of products related to mortality, morbidity, casualty, pensions and investments. The IFAA Programme at the Chinese University of Hong Kong (CUHK) has a stellar record of preparing students for bright careers as actuaries, financial analysts, risk managers and insurance professionals.

## Overview

Offered by the Department of Finance and unique in Hong Kong, the progressive BBA Programme in Insurance, Financial and Actuarial Analysis provides comprehensive training in all aspects of actuarial science and insurance company management. The IFAA curriculum goes beyond the study of theory to address broad practical business needs.

With structured curriculum patterns and internship opportunities, IFAA facilitates essential business exposure to enhance your career preparedness. Through our courses, you will become familiar with the material for professional examinations administered by the Society of Actuaries (SOA) in the United States. IFAA is recognised by SOA as a Centre of Actuarial Excellence, the highest level of recognition offered to universities.

While rooted in Hong Kong's institutional environment, the programme will give you frequent exposure to broader international issues and practices. IFAA has an outstanding reputation and strong network among well-known insurance companies in the region, which actively offer training and internships to IFAA students. The programme also boasts a strong employment record, with more than half of our graduates earning actuarial credentials and more than 60% successfully securing actuarial positions in multinational insurance companies. Other graduates go on to work in banks, business consulting firms, and other financial institutions.







# Your Development

By the time you complete the IFAA Programme, you should be familiar with the purpose, design and application of insurance products, finance and investment tools, as well as accounting, economics, management, mathematics, statistics and actuarial science. You can also expect to possess the following:

- Solid business communication skills;
- Effective analytical and problem-solving insight;
- Ability to apply learned business knowledge in a corporate environment;
- Confidence to propose innovative strategies in a global context;
- Awareness of current ethical issues in today's business world; and
- Specific knowledge of actuarial science and insurance, including life and non-life insurance product design, pricing, and risk management.

# Curriculum

IFAA elementary courses focus on fundamental business, economics, mathematics and statistics, laying the necessary groundwork for the advanced courses. Subsequent insurance and finance courses introduce you to insurance products, financial markets, derivative securities and the basic principles of financial risk management.

The specialised actuarial science courses in the programme cover the mathematics of pricing, valuation and hedging of a variety of products. Materials included in professional actuarial exams are covered in our syllabi, giving you a confident start to your career as an actuary.

## Major Requirements

78-81 credits including compulsory courses, elective courses and capstone course are required for successful completion of major.

Besides major requirements, students are also required to satisfy all requirements prescribed by the University.

## Recommended Course Patterns

### Year 1

#### Term 1

ACCT 1111	Foundations in Financial Accounting	3
DOTÉ 1030	Economics for Business Studies I	3
MATH 1530	Basic Mathematics for Business and Social Sciences, or	3
MATH 1010	University Mathematics	3

#### Term 2

DOTÉ 1040	Economics for Business Studies II	3
FINA 2010	Financial Management	3
FINA 2200	Introduction to Actuarial Science	3
MATH 1010	University Mathematics (if not taken)	3

### Year 2

#### Term 1

FINA 2220	Quantitative Methods for Actuarial Analysis I	3
FINA 3210	Risk Management and Insurance	3
MATH 1540	University Mathematics for Financial Studies	3

#### Term 2

ACCT 2121	Introductory Management Accounting	3
FINA 2230	Quantitative Methods for Actuarial Analysis II	3
FINA 3080	Investment Analysis and Portfolio Management	3
FINA 3221	Basic Long-term Actuarial Mathematics	3
FINA 3230	Life and Health Insurance	3

### Year 3

#### Term 1

FINA 3222	Basic Short-term Actuarial Mathematics	3
FINA 3240	Corporate Property and Liability Insurance	3
FINA 3290	Linear Models for Actuaries	3
	One computer programming course	3

#### Term 2 (Plan A: with internship but no exchange)

Actuarial Internship

#### OR

#### Term 2 (Plan B: with both exchange and internship)

Overseas Exchange / Actuarial Internship

## Plan A: with internship but no exchange

### Year 4

#### Term 1

MGNT1020 Management	3
One capstone course *	3
Six units of major elective courses **	6

#### Term 2 (Final Term)

Twelve units of major elective courses **	12
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## Plan B: with both exchange and internship

### Year 4

#### Term 1

Actuarial Internship / Overseas Exchange	
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#### Term 2

MGNT 1020 Management	3
One capstone course *	3
Six units of major elective courses **	6

### Year 5

#### Term 1 (Final Term)

Twelve units of major elective courses **	12
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#### \* Capstone courses

FINA 4270	Research Project in Insurance, Financial and Actuarial Analysis	3
FINA 4290	Actuarial Internship	3
FINA 4291	Internship in Insurance and Financial Institutions	3
MGNT 4010	Strategic Management	3

#### \*\* Major elective courses

ACCT 3151	Business Law	3
ACCT 3161	Taxation	3
CSCI 2100	Data Structures	3
CSCI 2520	Data Structures and Applications	3
DOTE 2051	Business Information Systems	3
FINA 3010	Financial Markets	3
FINA 3030	Management of Financial Institutions	3
FINA 3070	Corporate Finance: Theory and Practice	3
FINA 3250	Derivatives for Actuaries I	3
FINA 3260	Internship Experience	1
FINA 3295	Advanced Statistical Modeling for Insurance and Finance	3
FINA 4030	Selected Topics in Finance	3
FINA 4110	Options and Futures	3
FINA 4120	Fixed Income Securities Analysis	3
FINA 4140	Computational Finance	3
FINA 4150	Quantitative Methods for Financial Derivatives	3
FINA 4160	Intermediate Financial Theory	3
FINA 4211	Advanced Long-term Actuarial Mathematics	3
FINA 4215	Introduction to Actuarial Computing Using Prophet	1
FINA 4221	Advanced Short-term Actuarial Mathematics	3
FINA 4280	Derivatives for Actuaries II	3
IBBA 3040	Business Lectures Series	1
MATH 2010	Advanced Calculus I	3
MKTG 2010	Marketing Management	3
MGNT 2511	Global Experiential Learning I	1
MGNT 2512	Global Experiential Learning II	1
MGNT 2611	Business Sustainability	2
RMSC 4001	Simulation Methods for Risk Management Science and Finance	3
STAT 3007	Introduction to Stochastic Processes	3

Students can also take a minor outside of the IFAA programme to further broaden their knowledge.



# Connect with the World

## International Exposure

As the world becomes increasingly interconnected, professionals with a keen global business perspective will be best positioned for success. IFAA provides rich opportunities for you to develop world-wide connections and learn about different cultures, communication styles and unique business practices.

- More than 60% of our students go on exchange for at least one term.
- CUHK offers more than 280 student exchange programmes including university-wide, college, faculty and departmental exchanges.

IFAA students have gone on summer exchange to a number of renowned international universities, including:

Copenhagen Business School, Denmark

Erasmus University Rotterdam, Netherlands

Georgetown University, USA

Harvard University, USA

Korea University, Korea

La Trobe University, Australia

Lund University, Sweden

Maastricht University, Netherlands

McGill University, Canada

Osaka University, Japan

Queen's University, Canada

TELECOM Ecole De Management, France

University of California, Berkeley, USA

University of Economics, Prague, Czech Republic

University of Manchester, United Kingdom

University of St. Gallen, Switzerland

University of Toronto, Canada

Vienna University of Economics and Business, Austria

Washington University in St. Louis, USA



## Clement LI

### Exchange student in Erasmus University Rotterdam in The Netherlands (2023)

"Going on an exchange has always been exhilarating for me. The anticipation of embracing the unknown and adapting to different norms fills me with a sense of curiosity and excitement. Yet, it wasn't until I embarked on my overseas experience that I fully grasped the profound change it would bring, so much exceeding what I had imagined.

One aspect that significantly enlightened me was the learning environment in Dutch universities. Unlike the traditional spoon-feeding approach, Dutch professors encouraged students to question, debate, and challenge assumptions. In the tutorials that I attended, discussion was the heartbeat. It was not merely about being right; it was a journey of exploring possibilities. Students from around the world, each bringing their unique perspectives, came together to create a dynamic learning environment.

Beyond textbooks and lectures, my exchange journey revolved around collecting moments and broadening horizons. The half-year period offered ample time to immerse myself in a brand-new culture - either through strolling ancient streets, savouring foreign cuisines, or sharing laughter with unexpected companions. When I returned home, I carried not only a certificate but also a heart brimming with stories - a more enriched version of myself.

My exchange has been nothing short of transformative. Every moment has been a lesson in adaptability and cultural understanding. I have learned to appreciate diverse viewpoints, cultivate global awareness, and forge connections across borders. As I bid farewell to university life, this exchange feels like the perfect crescendo - a harmonious blend of academic growth, personal discovery, and unforgettable memories."



## Catherine YUEN

### Exchange student in Copenhagen Business School in Denmark (2023)

"Being able to study and live abroad has been my biggest dream so far, and I am grateful for all the support I have received from the university and all the people I have met throughout my journey.

By starting a new life in another country, I became more independent and resilient. Not only have I managed to adapt a rather different lifestyle, but also I have planned quite a few solo-trips for myself to explore foreign cultures. I was lucky enough to also meet people from North America, Australia and even the middle East during my trips. It has been an interesting experience to see how people from different corners of the world view things.



In terms of studying, students in Copenhagen Business School are highly inquisitive, self-disciplined and proactive individuals. They asked questions in lectures and showed their interest towards topics in economics and risk management. It turns out that I didn't learn solely from lecturer's materials, but also from interactive class discussions.

All in all, my exchange experience has been one of the best highlights in my university and I strongly recommend everyone to participate given the chance.

# Growth Opportunities

## Internship Programme

Our internship programme offers students the opportunity to gain direct practical work experience and expand their professional network. IFAA offers two internship programmes:

### 1. Actuarial Training Programme

IFAA pioneered the Actuarial Training Programme to place students in the actuarial departments of insurance companies and related business entities for more than five months. Almost all of our students complete a six-month internship during their third or fourth year of studies, augmenting their classroom learning.



### 2. Summer Internship Programme

IFAA students also pursue internship opportunities in various business fields, such as business consulting, insurance management, marketing and accounting. The potential to explore a different side of the business allows students to experience the insurance industry from different angles, expanding your knowledge and future career options.

A partial list of companies participated in our training programmes include:

Assicurazioni Generali S.p.A.

AIA Company Limited

AXA China Region Insurance Company Limited

BOC Group Life Assurance Company Limited

China Life Insurance (Overseas) Company Limited

Chubb Life Insurance Company Limited

CIGNA Worldwide

CTF Life Insurance Company Limited

Deloitte Advisory (Hong Kong) Limited

EY

FWD Life Insurance Company (Bermuda) Limited

HSBC Insurance (Asia) Limited

Manulife International Limited

Milliman Limited

Munich Reinsurance Hong Kong Branch

KPMG

Prudential Hong Kong Limited

RGA Reinsurance Company, Hong Kong Branch

Sun Life Hong Kong Limited

Swiss Reinsurance Company

Willis Towers Watson Hong Kong Limited



## Gina LAU

**Business Consulting - Actuarial & Insurance**  
**Ernst & Young Advisory Services Limited in 2023**

"It has been an incredibly remarkable six months of my life."

I feel so honoured to be a part of EY and have had the opportunity to contribute to an array of projects. My primary responsibility involved performing checks on various items according to the IFRS17 standard, including verifying assumptions and calculating the illiquidity premium. It is not always guaranteed that all the necessary information will be provided, but through these tasks, I have developed a keen understanding on how to deduce or interpret data and assess the reasonableness of the results. These skills are essential for becoming a sophisticated actuary.

I have also been captivated by the exposure EY has offered me. I was pleasantly surprised to be involved in projects with team members from different countries. This exposure has provided me with valuable insights into diverse perspectives and working styles. Alongside tasks that require intensive calculations, I have had the opportunity to assist with administrative work, such as writing meeting minutes for regular client meetings and managing the daily updated question-answer log. These experiences have given me a taste on the full picture of a real working environment.

I deeply appreciate the sincere and patient guidance from my team members, as well as the support and companionship from the intern group. The EY internship experience has not only enhanced my technical skills but has also given colour to my university life."



## James CHU

**Life & Health Business Management, Reinsurance**  
**Swiss Reinsurance Company (2022)**

"I worked in the Business Management division for six months and I mainly assisted in quarterly financial reporting and reinsurance treaty management. At school, the lecture time on reinsurance, a topic that typical households do not touch on, was limited. Swiss Re has given me a precious opportunity to gain exposure to reinsurance treaties and their real-life operations. I believe it would be an asset to my future career.

I had the chance to work with colleagues graduated from the IFAA programme a few years ago. They were generous in sharing their experience, from being a university student like me to becoming an independent and capable actuary. From career planning to work-life balance, I gained a lot of insights about my future career.

The company is very internationalised. I have worked with colleagues from India, Japan, Korea, China, and others, which strengthened my communication skills and allowed me to immerse myself in the workplace cultures of different countries. For instance, most colleagues, no matter their position, would call each other by their first names, while Japanese colleagues would refer to others and be referred to by their family name and "san", such as "Yamada-san".

This half-year internship has broadened my horizon and better equipped me for my future endeavours."



# Imagine Your Future

## Career Prospects

I FAA graduates are competitive candidates for most business careers, and are best suited for careers in banks, consulting firms, insurance firms and jobs that require quantitative analysis or financial calculation. The programme and CUHK Business School provide career-related activities such as career talks, alumni sharing, mentorship programme, company visits, and internship fairs to help students connect with potential employers.



## Actuaries

Graduates who aspire to become actuaries will be well-equipped for work at insurance companies, consulting firms, government agencies, banks, investment firms, the employee benefits department of large corporation, or any business that faces substantial financial risk.

## Insurance Professionals

I FAA graduates can pursue professional careers in insurance as underwriters, insurance adjusters, examiners and risk managers.

## Financial Analysts

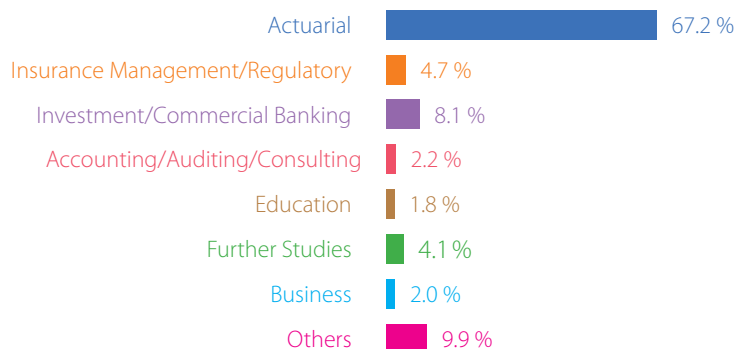
I FAA students receive training in financial markets, modelling and investments, and are well-positioned for a career as a financial analyst in an investment firm.

## Employers

AIA Company Limited  
AXA China Region Insurance Company Limited  
Bank of China (Hong Kong) Limited  
Bloomberg  
BNP Paribas Hong Kong Branch  
BOC Group Life Assurance Company Limited  
Chubb Insurance Hong Kong Limited  
Coherent Capital Advisors Limited  
CTF Life Insurance Company Limited  
Deloitte Advisory (Hong Kong) Limited  
Deutsche Bank  
EY

FWD Life Insurance Company (Bermuda) Limited  
Hang Seng Bank  
HSBC  
HSBC Insurance (Asia) Limited  
KPMG Advisory  
Manulife (International) Limited  
Nomura International Inc.  
Prudential Hong Kong Limited  
RGA Reinsurance Company, Hong Kong Branch  
Sun Life Hong Kong Limited  
Swiss Reinsurance Company  
UBS AG

## Distribution of 900 graduates by industry (2005-2024)



## Karis LAU

### 2018 Graduate

*"Smooth transition from Academic to Real-life career"*

When I graduated from secondary school, I only thought of pursuing a major which solve real life problem with unbiased mathematical solution. Graduating from CUHK's Insurance, Financial and Actuarial Analysis programme offers benefits more than that. The programme balances hard quantitative skills with soft skills like group work and presentations. This combination equips students with the technical expertise and interpersonal abilities sought after by employers.

Furthermore, the programme ensures a smooth transition from academia to the workforce. It includes practical components such as internships and case studies, allowing students to apply their knowledge in real-world settings. Students also engage with industry professionals, gaining insights into the insurance and actuarial sectors. Additionally, the program emphasises professional development, providing career guidance, networking opportunities, and mentoring support.

Overall, CUHK's programme provides a strong foundation, develops essential skills, and prepares students for successful careers in not only actuarial field but any fields required strong quantitative background."



## Kenneth LAI

### 2020 Graduate

*"It's my great pleasure to be one of the graduates from IFAA programme. Here I meet many brilliant people and good professors.*

The programme is managed with good efforts to equip us with the necessary technical skills and knowledge to catch up with the industry trends and pass professional exams of the Society of Actuaries or other actuarial professional bodies. The internship programme is also a highlight which is helpful by training us for future job challenges.

The programme enables me to develop strong and lifelong friendships. We learn together during the lessons, study together for exams and play together during off peak seasons. I still have deep connections with my batch mates even after graduation.

*My university life with IFAA is indeed one of the most memorable parts in life."*





# Accreditation

The IFAA Programme was awarded the title of a Centre of Actuarial Excellence by the Society of Actuaries (SOA) in 2011. This is the highest award bestowed upon an actuarial programme, and currently there are only about 40 universities holding this title. The SOA recognises IFAA's excellence in a wide range of areas, including curriculum design, faculty qualifications, connection with the insurance industry and graduate prospects:



*“Fully integrated business courses, close to 100% participation in its internship and co-op programme and a strong connection to the industry are among the exceptional qualities of the CUHK actuarial science programme, and are instrumental in positioning students for success.”*

CAE Evaluation Committee, Society of Actuaries

CUHK is a participant in the inaugural group of 13 universities recognised by the Society of Actuaries for the University-Earned Credit (UEC) programme in August 2022. IFAA students taking approved courses at CUHK are eligible for specific SOA exam credit if they obtain the required score.

## Professional Examinations

To become a qualified actuary, one must follow an educational pathway designed by one of the professional actuarial bodies. Most employers in Hong Kong look for graduates with good exam progress, and have relevant internship or work experience in an actuarial role.

The educational pathway leading to a Fellow of the Society of Actuaries begins with two components: associateship examinations and Validation by Educational Experience (VEE). These are followed by e-Learning modules, projects, fellowship examinations and professionalism courses. The IFAA courses below cover to the current SOA associateship examinations. IFAA graduates typically pass 4 to 5 SOA required associateship examinations below, and are considered highly marketable.

<i>SOA Associateship Exam</i>	<i>Relevant Course(s)</i>
Probability	FINA2220
Financial Mathematics	FINA2200
Statistics for Risk Modelling	FINA3290, FINA3295
Fundamentals of Actuarial Mathematics	FINA3221, FINA3222
Advanced Long-term Actuarial Mathematics	FINA4211
Advanced Short-term Actuarial Mathematics	FINA4221

Required knowledge of economics, accounting, finance and mathematical statistics in the VEE component is fulfilled by good performance in relevant validated courses taken at qualified universities. CUHK offers such courses, giving IFAA students an advantage over graduates from other programmes.

<i>SOA VEE Area</i>	<i>Course(s) offered for Validation</i>
Accounting and Finance	ACCT1111, FINA2010
Economics	DOT1030, DOT1040
Mathematical Statistics	FINA2230

# IFAA Qualified Actuaries







## Students' Life

IFAA students hail from various countries around the globe. Your fellow classmates bring with them a wealth of unique knowledge and expertise that will enrich your shared experience in the programme.

Number of  
current students

**219**

Alumni network

**900+**





## Society of Insurance, Financial and Actuarial Analysis (SIFA)

SIFA, the student organisation of the IFAA programme, aims to unite IFAA students and strengthen their professional image. SIFA promotes the IFAA Programme within and outside of CUHK, sponsoring activities and gatherings that expose students to a broad array of dynamic business and communication skills.



# Admissions Requirements

## JUPAS Students

Local students taking Hong Kong Diploma of Secondary Education (HKDSE) Examination should apply through JUPAS.

### JUPAS code: JS4238

#### Minimum Entrance Requirements

HKDSE Subject	Requirement
Chinese Language	Level 3
English Language	Level 3
Math (compulsory part) *	Level 5
Citizenship and Social Development	Attained
Elective subject 1	Level 3
Elective subject 2 or Math (extended part) M1 / 2	Level 3

\* Math (extended part) M1 / 2 at Level 5 is required if Math (compulsory part) at Level 3 or 4 is obtained.

#### Admission Formula

'Best 5 Principle' with the following weights:

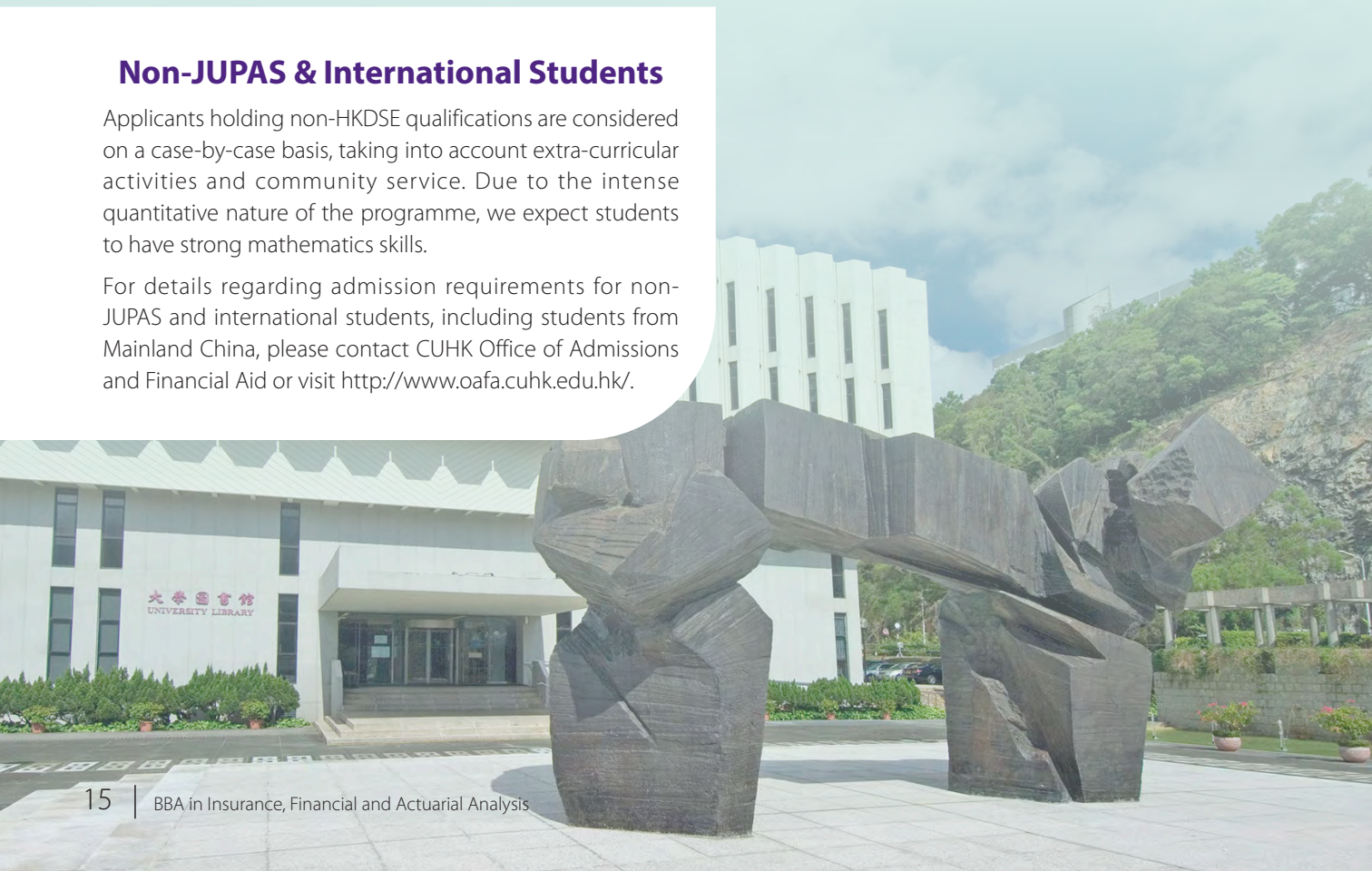
HKDSE Subject	Weighting
English Language	1.25
Math (compulsory part)	1.5
Math (extended part) M1 / 2	1.5
Best of Physics, Chemistry, Economics, or ICT	1.25
Other subjects	1

The 5 best subjects may include either M1/2 or Other Language (category C subjects) but not both.

## Non-JUPAS & International Students

Applicants holding non-HKDSE qualifications are considered on a case-by-case basis, taking into account extra-curricular activities and community service. Due to the intense quantitative nature of the programme, we expect students to have strong mathematics skills.

For details regarding admission requirements for non-JUPAS and international students, including students from Mainland China, please contact CUHK Office of Admissions and Financial Aid or visit <http://www.oafa.cuhk.edu.hk/>.





# Scholarship Opportunities

Since 2004, the Hong Kong Federation of Insurers Educational Trust has provided scholarships to CUHK undergraduate students majoring in Insurance, Financial and Actuarial Analysis, as a way to support tertiary insurance education in the city.

Besides, IFA Academic Excellence Award was launched in 2021 with a recognition to the Insurance, Financial and Actuarial Analysis students for their outstanding academic performance and making continued progress in their studies.

CUHK also provides university-wide scholarships and college scholarships to Business School students. The following are examples of some of the scholarships our students have received:

- Cheung Chuk Shan Scholarship
- Chung Chi Admission Scholarship
- CUHK Golden Jubilee Scholarship for Outgoing Exchange Students
- CW Chu Foundation Scholarship, CW Chu College
- HKSAR Government Scholarship
- Kunkle and Pommerenke Grand Admission Scholarship
- Morningside College Scholarship
- Shaw Admission Scholarship
- Talent Development Scholarship
- Wu Yee Sun College Academic Scholarship





# Programme Advisory Committee

IFAA's curriculum development and intended learning outcomes are guided and regularly reviewed by the programme advisory committee, comprised of prominent insurance and business executives. The committee provides high-level steering for the programme and advice on the quality and relevance of course content.





# 註冊

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To learn more, please visit our website where you can find additional information, resources and FAQs.



IFAA Website

