

Bachelor of Science in
Actuarial Science
精算學理學士課程



HKU programme code 6729

Bachelor of Science in Actuarial Science Programme BSc(ActuarSc)

History

In 1993, the then Department of Statistics proposed a new BSc degree in Actuarial Science, and was subsequently renamed the Department of Statistics and Actuarial Science in 1998. The University and Polytechnic Grants Committee (UPGC), the predecessor of the University Grants Committee (UGC), strongly supported the proposed degree, which was regarded as filling an inexplicably vacant niche in Hong Kong higher education. In 1994, 20 new student places were assigned to what was now the first actuarial science programme in Hong Kong. Since the programme's launch, the Department has admitted students with excellent public examination results every year. In light of the programme's success in terms of student quality and job prospects, the Department proposed its expansion for the next triennium in 1996, and the University approved an increase in student places to 34 commencing September 1998. The Department's name change in November 1998 when it became the Department of Statistics and Actuarial Science, is a sign of the Actuarial Science programme's importance.

Over the years, the programme continues to admit top students through the JUPAS scheme, and it has attracted many non-JUPAS students and scholarship holders from top universities in mainland China. It is also noteworthy that the programme had attracted many Form 6 students through the Early Admission Scheme in the past (before HKDSE replaced HKCEE and HKALE). The enrollment of first-year Actuarial Science students in 2021 totalled 80 in the four-year programme. The HKU Actuarial Science programme continues to rank amongst the top tier of quantitative undergraduate programmes in Hong Kong in terms of average JUPAS admission quality since 1996.

Programme Aims and Features

The HKU Bachelor of Science in Actuarial Science programme is the only programme in Hong Kong accredited by the UK's Institute and Faculty of Actuaries. It provides formal academic and professional training to students who wish to join the actuarial profession. Although actuarial science is a separate discipline with its own area of knowledge, modern actuarial training requires multidisciplinary knowledge in probability, statistics, economics, investment, finance, law, taxation and accounting. The Actuarial Science curriculum reflects this requirement by incorporating various interdisciplinary courses into the basic yet comprehensive actuarial training.

The programme is designed to equip students with a solid background in actuarial science, and enable them to develop the confidence and analytical skills needed to define and tackle problems in actuarial science and related fields. Students should be able to evaluate and measure various kinds of risk using effective quantitative methods, and become proficient in formulating and communicating practicable business strategies with professionalism as well as accuracy.

Meanwhile, the Actuarial Science programme is also specifically designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organisations, thus allowing them to successfully join the actuarial profession with internationally-recognised qualifications upon graduation. In addition, the programme provides sufficient academic training to allow students to pursue postgraduate studies in actuarial science or related areas should they wish to.

What is an Actuary?

An actuary is a professional who deals with the application of probability and statistical theories to problems in insurance, investment, pensions, and financial risk management. The majority of actuaries work for life, health and property/casualty insurance companies, which heavily rely on actuaries' judgment to ensure their financial security. Other actuaries work for actuarial consulting firms, offering their expertise on financial services, health care, pension plans, asset/liability management, etc. Other opportunities are available for actuaries in a variety of industries.



The 'Brains'

Actuaries' duties are varied, challenging and so important that they are frequently called the "brains" of the insurance business. Actuaries work with facts, figures and people to solve business problems. They are not only the statisticians of the insurance industry, but also have broader responsibilities in financial management. They frequently evaluate the past, make use of known changes, interpret expected changes and set future directions to determine insurance premiums and retirement benefits.

Actuaries work in many capacities within businesses, consulting firms, government agencies and universities, and often fill senior managerial roles in insurance companies, even becoming senior officers or company heads. Most importantly, all actuaries must have a strong aptitude for mathematics and the ability to apply actuarial knowledge to a range of financial situations.

Becoming an Actuary 精算師

To become an actuary, you could first obtain a Bachelor of Science in Actuarial Science degree from HKU (4 years)

To qualify as an actuary, you must obtain an Associateship and Fellowship title from a professional organisation. Qualifications from Australia, the UK and the US are all fully recognised in the local actuarial and insurance industries. The average period of time needed to obtain the necessary titles ranges from three to nine years. The relevant professional organisations are shown below.

The HKU Bachelor of Science in Actuarial Science programme has exemption arrangements for certain professional examinations with the Institute and Faculty of Actuaries and has obtained Validation by Educational Experience (VEE) course approval from the Casualty Actuarial Society, the Society of Actuaries and the Canadian Institute of Actuaries in North America.

Institute and Faculty of Actuaries, UK www.actuaries.org.uk	Casualty Actuarial Society, US www.casact.org
Society of Actuaries, US www.soa.org	Institute of Actuaries of Australia www.actuaries.asn.au

Details of such arrangements can be found at the Department of Statistics and Actuarial Science's website.



<https://saasweb.hku.hk/current/as.php>

BSc(ActuarSc) Curriculum

University Educational Aims

To enable our students to develop capabilities in:

the pursuit of academic / professional excellence, critical intellectual enquiry and life-long learning

tackling novel situations and ill-defined problems

critical self-reflection, greater understanding of others, and upholding personal and professional ethics

intercultural understanding and global citizenship

communication and collaboration

leadership and advocacy for the improvement of the human condition

Programme Learning Outcomes

Through coursework and tutorial classes and/or research-based project in the curriculum, by the end of the programme students should be able to:

- (1) understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pensions, financial risk management and demography
- (2) understand and identify the nature of insurance, finance and investment risks
- (3) develop analytical skills to evaluate and measure various kinds of risk, and appraise the related moral and ethical issues
- (4) formulate effective business strategies to manage various kinds of risk
- (5) communicate and collaborate effectively on actuarial science related issues
- (6) discuss current actuarial issues and acquire and apply practical knowledge in specially designed courses

Students are expected to be in full-time status for eight academic semesters (in addition to their 6-month or longer full-time internships) in order to fulfill the degree requirements.

Students may optionally take Majors or Minors outside the BSc(ActuarSc) programme, provided that they fully satisfy the requirements.

The programme structure is subject to change.

For the most updated syllabus, please visit the Science Faculty's website.

Year 1 (60 credits)	42	ACCT1101 Introduction to financial accounting ECON1210 Introductory microeconomics ECON1220 Introductory macroeconomics MATH1821 Mathematical methods for actuarial science I MATH2822 Mathematical methods for actuarial science II STAT2901 Probability and statistics: foundations of actuarial science STAT2902 Financial mathematics	18	Other elective / common core / language courses
Year 2 (60 credits)	42	COMP1117 Computer programming STAT3901 Life contingencies I STAT3902 Statistical models STAT3903 Stochastic models STAT3904 Corporate finance for actuarial science STAT3905 Introduction to financial derivatives STAT3907 Linear models and forecasting	18	Other elective / common core / language courses
Year 3 (60 credits)	30	STAT3906 Risk theory I STAT3908 Credibility theory and loss distributions STAT3909 Life contingencies II STAT3910 Financial economics II STAT4904 Statistical learning for risk modelling	30	Other elective / common core / language courses
Year 4 (54 credits)	12	<i>At least 12 credits selected from the following courses:</i> STAT3911 Financial economics II STAT3951 Topics on advanced actuarial modelling STAT3953 Fundamentals of actuarial practice STAT3954 Current topics in actuarial science STAT3956 Life contingencies III STAT4901 Risk theory II STAT4902 Selected topics in actuarial science STAT4903 Actuarial techniques for general insurance	42	Other elective / common core / language courses
Capstone Requirement (6 credits)	6	<i>At least 6 credits selected from the following courses:</i> STAT4711 Capstone experience for actuarial science undergraduates STAT4767 Actuarial science internship STAT4798 Statistics and actuarial science project		

All courses listed in the curriculum are 6-credit bearing unless otherwise stated.



Center of Actuarial Excellence

The Department of Statistics and Actuarial Science, the University of Hong Kong has been designated a Center of Actuarial Excellence (CAE) by the US Society of Actuaries (SOA) since December 2011.

This prestigious designation is awarded to schools that demonstrate excellence in Actuarial Science by meeting strict criteria on curriculum quality, number and quality of graduates, qualified faculty, ties with business, and beneficial research and scholarship.

Over the years, the Department has dedicated itself to world-class standards of research, teaching and learning, and it is now highly regarded as an international centre of research and learning in the field of statistics and actuarial science.

CAE Research Grant

The Department of Statistics and Actuarial Science was awarded the CAE Research Grant by the SOA. Worth US\$281,490, the grant has been used to conduct a three-year project on the actuarial study of dependent risks. As one of the only three universities in China/Asia to have been designated a CAE by the SOA, and one of just 33 worldwide, HKU is also the only university in Asia having been awarded a CAE Research Grant at the time of this writing.

For the list of CAE Grant recipients and award's history, please visit: <https://www.soa.org/Education/Resources/Cae/edu-cae-grants-award-history>



For details of the Department's SOA-funded project, please visit: <https://saasweb.hku.hk/center-actuarial-excellence/>



Actuarial University Ranking

HKU was ranked No.2 worldwide and No.1 in Asia based on research contributions from the top 4 actuarial journals (*Insurance: Mathematics and Economics*, *North American Actuarial Journal*, *ASTIN Bulletin*, and *Scandinavian Actuarial Journal*) amongst non-business schools over a 25-year period from 1994 to 2019. It was 1994 when the BSc in Actuarial Science programme was launched. HKU was even ranked No.1 in 2006 and 2013 worldwide in this global study conducted by the University of Nebraska-Lincoln.



Institute
and Faculty
of Actuaries

Accreditation

Under a new accreditation agreement with the Institute and Faculty of Actuaries (IFoA), the University of Hong Kong now joins the ranks of select institutions worldwide that offer the maximum exemptions (CS1, CS2, CM1, CM2, CB1, and CB2) approved by the Institute and Faculty of Actuaries (IFoA), United Kingdom.

The University of Hong Kong has previously obtained accreditation for IFoA subjects CT1-CT8 from the UK's only chartered professional body dedicated to educating, developing and regulating actuaries based both in the UK and internationally. With the new accreditation, students who graduate with a BSc(ActuarSc) degree from the University of Hong Kong with the required marks in specified subjects will be exempted from taking various IFoA subjects in the new curriculum, as they begin their journey towards qualifying as an actuary.



SOA - University-Earned Credit (UEC) Program

The University-Earned Credit (UEC) program of the Society of Actuaries (SOA) allows university students to become eligible for SOA exam credit by attaining a designated UEC mark on university courses at approved Centers of Actuarial Excellence (CAE).

The University of Hong Kong (HKU), as one of the CAE designated by the SOA, obtained the UEC status approved by the SOA in July 2022, as one of the 13 inaugural UEC participants. Students who have taken the approved courses at HKU (not by credit transfer) and received a UEC mark of 60% or above are eligible to apply for the corresponding UEC from the SOA for exam exemption.

The UEC mark of a student taking an approved HKU course refers to Final Exam mark of that course.

The related SOA exams and the corresponding approved HKU course(s) are listed as follows:

Exam FM	Exam SRM	Exam ASTAM
STAT2902	STAT3907, STAT4904	STAT3908, STAT4903
Exam FAM-L	Exams FAM-S & ASTAM Sequence	
STAT3901	STAT3906, STAT3908, STAT4903	

Note: Exam P is not eligible for UEC.



Prizes & Bursaries

Many scholarships are available to our actuarial science students in each year of study. The following are examples of some of the scholarships which have been awarded to our students.

- C.V. Starr Scholarship
- Centenary Scholarship Fund Award
- CMA and Donors Scholarship
- HKSAR Government Scholarship
- HKU Class Giving Scholarship
- HKU Foundation Entrance Scholarship
- HKU Foundation Entrance Scholarships for President's Scholars
- HKU Foundation Scholarships for Outstanding International Students
- HKU Foundation Scholarships for Outstanding Mainland Students
- HKU Foundation Scholarships for Outstanding Students
- HKU Worldwide Undergraduate Student Exchange Scholarships
- HSBC Hong Kong Scholarship
- Kai Chong Tong Scholarship
- Lee Chau Kee Scholarships
- Lee Chau Kee Scholarships for Student Enrichment
- Li Po Chun Charitable Trust Fund Undergraduate Scholarship
- Sports Scholarships
- The Bank of East Asia Scholarship

Internship Programme

There is no better training than obtaining solid hands-on experience in the real workplace. Our Internship Programme serves precisely this purpose. As an intern, the student will gain insight into the challenging world and daily activities of an actuary while strengthening his/her technical, analytical and communication skills.

Under the Internship Programme, BSc(ActuarSc) students are eligible to use the Department's **Internship / Job Online-application System**, where related internships and other job openings including graduate positions will be posted. Our alumni may wish to know that normally they will still be eligible to use the System after graduation from our Department.

The Internship Programme assists students by advertising part-time, summer, temporary and full-time internship positions, sending the CVs of interested students to employers, and arranging interviews for shortlisted students. Recruitment activities normally begin at least six months prior to the expected starting date of a position. For details about our Internship Programme, please visit: <https://saasweb.hku.hk/teaching/internship-details.php>



Partial list of companies participating in the Department's internship programme:

- Ageas Insurance (富通)
- AIA Group Limited (友邦)
- AXA Insurance (安盛)
- BOC Group Life Assurance (中銀人壽)
- Deloitte Touche Tohmatsu (德勤)
- Ernst and Young (安永)
- FWD Life Insurance (富衛)
- General Re (通用再保險)
- Goldman Sachs (高盛)
- HKSAR Government (香港特別行政區政府)
- HSBC Life (滙豐保險)
- JP Morgan (摩根大通)
- Manulife (宏利)
- Mercer (美世)
- Morgan Stanley (摩根士丹利)
- Prudential (保誠)
- RGA Reinsurance (美國再保險)
- Sun Life Financial (永明金融)
- Standard Chartered (渣打)
- Swiss Reinsurance (瑞士再保險)
- Willis Towers Watson (韋萊韜悅)
- Zurich Insurance (Hong Kong) (蘇黎世保險)

Student Sharing

Leung Wai Kwan BSc (Actuarial Science)
Manulife (International) Limited (2021)

Learning in school is one thing, but taking those skills into workforce and applying them is a great way to explore yourself and career paths that suit you. Internship programme offers students a great opportunity to gain direct practical experience in actuarial field.

For students who are interested in internship programme, you are encouraged to have a growth and questioning mindset. When you first start your internship, you may feel frustrated because you may not understand the concepts and what are you achieving in your tasks. Nonetheless, if you are willing to ask questions, embrace challenges and view your efforts, you can expose yourself to new concepts, new ideas that you have never thought about. Having this resilient and critical mindset, you may gain much more than you expected in the internship experience.



He Xutong BSc (Actuarial Science)
Prudential Corporation Asia (2021)

I am grateful to have my first internship in Prudential Corporation Asia. Through this internship programme, I have a more insightful understanding of what an actuary does in daily work and I have learned lots of actuarial science knowledge, technical skills, and soft skills. First of all, I had a chance to apply what I have learned in statistic courses in my work and acquired some knowledge about the insurance products. For instance, I have learned how different risks are related to different products and how to use the data to estimate the economic capital required in some extreme situations. Also, I have polished my Excel and VBA skills during the internship.

Besides, during the internship, my supervisor and other colleagues have provided me with some timely feedbacks and suggestions on my work, which have also motivated me a lot. They also gave me some suggestions on my future career path. Generally speaking, the working atmosphere was really nice in PCA.

Tang Shiqi BSc (Actuarial Science)
Prudential Corporation Asia (2021)

During my six-month internship at Prudential Corporation Asia, I gained a general understanding of the main work content in the actuarial industry. During my regular workday, I had not only learned about the specific model operations and workflow of the actuarial department of Prudential Corporation Asia, but also improved my ability to cooperate with other students and communicate with my supervisors.

In addition, the very friendly office atmosphere and the meticulous and inspiring supervisors had made my internship a happy and caring one. I had not only acquired knowledge and skills, but also gained friendships and I was able to ask more experienced supervisors when I encountered doubts and difficulties in the future, which is the most valuable asset I gained from my internship.



Fung Bryan Tsz Cheung BSc (Actuarial Science)
FWD Life Insurance Company (Bermuda) Limited (2021)

During this internship programme, I have exposed to a lot of learning opportunities in workplace which I have never learnt at the University before. At the University, we learn about theories and solving theoretical problems. At work, we learn by doing tasks with our own hands. For instance, we use Excel tools to calculate the policy values including the amount of accumulated dividend and coupons, projecting the policy values of the first year using Excel. One of the greatest gains from the internship is the problem-solving skill when doing tasks. The use of Excel and other tools helped my work a lot during the internship by simplifying a very tedious and long task to an easy job by clicking a few buttons. The seniors from workplace were also kind to us. They were very willing to teach us skill sets and the knowledge they used while they were working. They also shared some future career aspects with us to aid our future pathway in actuarial science.



Scholarships

China Life Insurance (Overseas) Scholarship in Actuarial Science

In 2017, China Life Insurance (Overseas) Company Limited kindly donated a sum of HK\$200,000 to establish a scholarship for outstanding undergraduate students pursuing Actuarial Science studies at the University of Hong Kong, with an objective of nurturing talents for the insurance industry. A total of five scholarships shall be awarded annually to Year 2 or above students in the BSc(ActuarSc) programme, with at least one award each to students in the second, third and fourth year of study.

Dr Patrick S C Poon Scholarship in Actuarial Science

Dr Patrick S C Poon, SBS, Honorary University Fellow of HKU, generously pledged to establish a scholarship scheme to encourage young talents to pursue a career in the actuarial profession and to promote the development of actuarial science in Hong Kong. Five awards shall be awarded annually to first-year BSc(ActuarSc) students freshly admitted through JUPAS with the most outstanding entrance record. Each Dr Patrick S C Poon Scholarship in Actuarial Science is valued at HK\$50,000, whilst an additional HK\$10,000 will be awarded to successful candidates who achieve Level 5** in HKDSE English Language or who urgently require financial assistance to complete their studies. The scholarship is renewable based on satisfactory performance in each year of study.

Sir Edward Johnston Prize

(awarded by the Institute and Faculty of Actuaries, UK)

The Sir Edward Johnston Prize is awarded to the best performing graduating students on the actuarial programmes at the five universities (in South East Asia), including HKU, which are linked to the Institute and

Faculty of Actuaries (IFoA). For details, please visit the IFoA's website: <https://www.actuaries.org.uk/>

Statistics and Actuarial Science (SAAS) Scholarships

In addition to the aforementioned university-wide scholarships, 28 scholarships, each worth between HK\$4,000 and HK\$20,000, are made available each academic year by the Department of Statistics and Actuarial Science. The Department awards these scholarships annually on the basis of academic merit to outstanding students in different years of study who are pursuing a BSc degree in Actuarial Science or a first major in Decision Analytics, Risk Management or Statistics.

The Life Underwriters Association of Hong Kong Scholarship

In 2022, The Life Underwriters Association of Hong Kong and The LUA Foundation Limited have both pledged an aggregate annual donation, for an initial period of five years, to support undergraduate students through scholarship and bursary. Two scholarships shall be awarded annually to year 2 or above local full-time undergraduate students reading the Bachelor of Science in Actuarial Science OR Bachelor of Science (Major in Risk Management) programs under the Department of Statistics & Actuarial Science. The Scholarship shall be awarded based on academic merit with cumulative GPA3.2 or above. In cases of students of equal academic merit, participation of community service shall also be taken into consideration. The Scholarship shall be of the value of HK\$10,000 each.

The Hong Kong Federation of Insurers Scholarship

In 2012, the Hong Kong Federation of Insurers Educational Trust kindly pledged an annual donation to support scholarships for undergraduates majoring in Actuarial Science at HKU, with the objective of encouraging tertiary education in insurance. A maximum of six scholarships, each of the value of HK\$20,000, shall be awarded annually to outstanding BSc(ActuarSc) Year 3 or above local students.

YF Life Scholarship in Actuarial Science and Risk Management*

In 2023, YF Life Insurance International Limited kindly pledged to establish the YF Life Scholarship in Actuarial Science and Risk Management at The University of Hong Kong, with an objective of nurturing talents for the insurance industry. Five scholarships, each of the value of HK\$15,000, shall be awarded annually to outstanding undergraduate students in the Bachelor of Science in Actuarial Science or Bachelor of Science (Major in Risk Management) degrees on the basis of academic merit and performance in an interview, if arranged by the Selection Committee.

For more details about the Department's scholarships, please visit: <https://saasweb.hku.hk/programme/scholarship.php>



For details about all HKU's scholarships, please visit: <https://www.scholarships.hku.hk>



*To be approved by the University

HKU Worldwide Undergraduate Student Exchange Programme

HKU's Worldwide Undergraduate Student Exchange Programme offers exchange opportunities for students in world-renowned universities such as Harvard University, Columbia University, McGill University, the University of Toronto, the University of California at Berkeley, Davis, Santa Barbara and Los Angeles, the University of Melbourne, the University of British Columbia, the University of New South Wales, the University of Amsterdam, Georgetown University and the University of Waterloo. The following are messages from some of the Department's former exchange students.

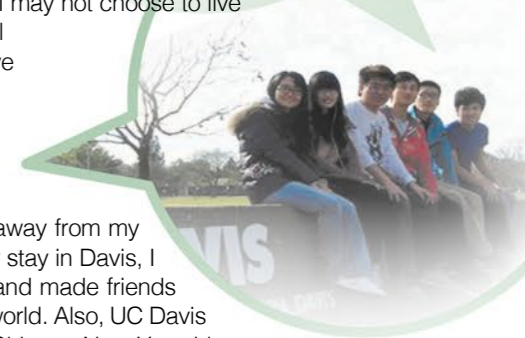


HAO Shuoyang 2016 BSc(ActuarSc) graduate Exchange at University of Waterloo

Last semester, I went to the University of Waterloo as an exchange student, and I had four months there experiencing a new way of life. Waterloo is a city in southern Ontario, Canada. It is the smallest of the three cities in the regional municipality of Waterloo. Compared with cities in China, I would rather call it a small town, and I did experience a quite different life from Hong Kong. If I am asked what I learned during this semester, I think I will say that the courses I took were not the most important thing but that learning another way of life was. Without this exchange experience, I would not have experienced an entirely new kind of life. It also changed my view of life. In future I may not choose to live a modern city life but rather a quiet comfortable rural life. My four months in Canada were really impressive and unforgettable.

SUN Lianyi 2014 BSc(ActuarSc) graduate Exchange at University of California, Davis

Participating in the HKU Exchange Programme far away from my home country was exciting and full of fun. During my stay in Davis, I took classes with renowned professors in statistics and made friends with outstanding students from different parts of the world. Also, UC Davis gave me one of the most memorable and special Chinese New Year I have ever experienced. International friends held a party for exchange Chinese students, during which we made dumplings, had a big meal and chatted. In addition, as a lover of travelling, I went to the top of the Space Needle in Seattle to enjoy a full view of the city, went to a Celine Dion concert in Las Vegas and touched the bull statue in New York City. I think I will treasure the days in Davis for my whole life.



Student Society

The Statistics and Actuarial Science Society (SASS) has been serving students of the HKU Department of Statistics and Actuarial Science since its establishment in 1969. Over the years, the student society has grown into a large family with thousands of members.

The SASS has dedicated itself to promoting the study of actuarial science, decision analytics, risk management, statistics and applied artificial intelligence. It also serves to provide a sense of unity, promote the welfare of its members and maintain a harmonious relationship between staff members and students.

Every year, the SASS organises a variety of functions, including the alumni mentorship scheme, annual dinner, annual survey, firm visits and many more. The SASS works closely with the Department and serves its members with enthusiasm. They strive in the best interests of their members and aim to ensure they enjoy a fruitful and joyful university life.

Orientation Camp



Superpass Dinner



Annual Dinner



Career Talk



Alumni Mentorship Scheme



The alumni mentorship scheme provides two-way communication between mentors and mentees. Through regular gatherings and mutual sharing, mentees can learn from their mentors' life experience and, at the same time, better understand the employment situation and their career prospects. In return, mentors receive up-to-date information on the current student population, the Statistics and Actuarial Science Society, the Department and the University at large. Mentors also enjoy opportunities to become acquainted with their counterparts working in similar fields.



Career Prospects

The Department of Statistics and Actuarial Science has introduced the Career Advising Programme (CAP) to help students pinpoint their strengths and weaknesses in terms of interview/CV writing skills and better prepare students to seize career opportunities readily. Besides one-to-one career consultation, the CAP will organise other career-related activities to deepen students' understanding of the industries.

The following is a non-exhaustive list of services and activities provided under the CAP:

- Tailored consultation on CV and cover letter writing
- One-to-one or group consultation on interview skills, e.g. mock interview
- Tailored modules of Professional Preparation Programme (PPP)
- Career talks
- Company visits
- Alumni sharing
- Corporate Mentorship Programme

Employment Statistics of Actuarial Science Graduates

Given Hong Kong's booming insurance industry and the rapid development of the mainland China market, actuaries enjoy very attractive career prospects. Recent graduates hold positions in major insurance and reinsurance companies, actuarial consulting firms, and investment banks such as AIA, AXA Insurance, BOC Group Life Assurance, HSBC Life, Manulife, Sun Life Financial, Prudential, Willis Towers Watson, General Re, Reinsurance Group of America, JP Morgan, Standard Chartered, Ageas Insurance, Ernst and Young, Mercer, Goldman Sachs, Morgan Stanley, Deloitte Touche Tohmatsu and many others.

Some of our graduates have also pursued postgraduate studies in world-renowned universities such as Harvard University, Cambridge University, Oxford University, the London School of Economics and Political Science, The Wharton School of the University of Pennsylvania, Johns Hopkins University, Columbia University and Cornell University.

2022 BSc(ActuarSc) Graduates

The majority of BSc(ActuarSc) graduates were employed in Commerce & Industry.

Employment Sectors:



The remuneration received by BSc(ActuarSc) graduates in full-time employment is shown below:

Gross Income (Monthly)

Mean	HK\$27,635
Median	HK\$24,558
Maximum	HK\$90,000
Minimum	HK\$16,000

Number of Job Offers Received by 2022 BSc(ActuarSc) Graduates:	No. of job offers received	No. of graduates (% of graduates)
One	35.7%	
Two	26.2%	
Three	21.4%	
Four or more	16.7%	

Testimonials from Graduates

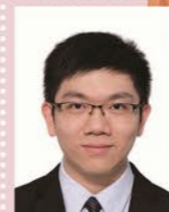
SHU Tong, Lucien 2020 BSc(ActuarSc) graduate

The actuarial science program in HKU offered me nearly everything I can think of that is necessary and helpful for one to develop and pursue the profession of actuaries – courses closely tied to exam syllabi of actuarial associations, professional skill training sessions, collaboration with actuarial associations and market players, resources for job opportunities, etc. Through the 4-year study and experience, what I have amassed is not merely the theoretical actuarial knowledge and practical working experience, but the connection to the wider actuarial market and the passion to carry on the further pursuit of the actuarial profession." Lucien is working as Actuarial Analyst in Willis Towers Watson at the time of this writing.



CHAN Wing Ho Ronald 2019 BSc(ActuarSc) graduate

Being recognized by the Society of Actuaries, the programme is arguably the most prestigious actuarial programme offered in Asia. From what I have learnt and experienced throughout the 4 years of study, it is no exaggeration. It has extensive connections with business institutions from various fields for potential job opportunities. Most students graduate with at least an internship experience and several passed actuarial exams, which give us the edge in job applications and career progression. The programme has equipped me with the essential analytical skills and a wide exposure in actuarial, economic, financial and risk management fields to kickstart my career. The comprehensiveness and thoroughness are unmatched by other programmes in related fields. I am grateful for everything learnt here." Ronald is working as an Actuarial Assistant in China Life Insurance (Overseas) Company Limited at the time of this writing.



World-class Research and Excellence in Teaching and Learning

Since its establishment in 1967, the HKU Department of Statistics and Actuarial Science has always dedicated itself to reaching world-class standards with aspirations to be an international centre of excellence for both research and teaching and learning (T&L). Underpinning this enduring dedication is the Department's dynamic research profile with wide-ranging areas of expertise. Over the years, the Department has been awarded General Research Fund (GRF) grants by the University Grants Committee (UGC) to undertake numerous research projects in statistics and actuarial science.

According to the UGC's Research Assessment Exercise (RAE) 2020, we rank No.1 in terms of the percentage judged to meet the standard of 4-star, the highest starred level for overall quality profile of research, out of seven comparable units of assessment for Mathematics and Statistics. Our impact and environment

sub-profiles even reach 100% of 4-star quality, i.e. outstanding in terms of reach and significance, and world-leading in terms of vitality and sustainability respectively, as defined by the UGC.

The RAE is part of the UGC's commitment to assessing the performance of the UGC-funded universities in Hong Kong. It is a criterion-referenced exercise against agreed quality levels as defined by international standards. Over the years, the outcome of the RAE has provided guidance for universities' developments in respect of pursuing research excellence. Universities' performance in the RAE also informs the allocation of part of the Research Portion of the Block Grant.

For details of the Department's research directions, please visit:

https://saasweb.hku.hk/research/staff_interest.php



Our Teaching Staff and Research Fields

Dr. Tim J. BOONEN

BSc, MSc, PhD *Tilburg*
Actuarial Science; Capital Allocation; Game Theory; Insurance Economics; Optimal (Re) insurance; Longevity Risk Modelling; Risk Sharing

Dr. Y. CAO

BS *Fudan*; MS, PhD *Princeton*
Machine Learning; Learning Theory; High-dimensional Data Analysis; Optimization

Professor K.C. CHEUNG

BSc(ActuarSc), PhD *HK*; ASA
Actuarial Science; Dependent Structures; Stochastic Orders; Risk Measures; Optimal Insurance; Extreme Value Theory

Dr. Olivia T.K. CHOI

BSc *UBC*; MSc *Oxon*; PhD *ISM*
High Frequency Data Analysis/ Market co-integration; Analysis of dually listed companies across different regions

Dr. L. FENG

BS *Renmin U*; PhD *Rutgers*
Statistical Machine Learning; Image Data Analysis; High-dimensional Statistics; Deep Learning

Dr. Edwin C.H. FONG

BA, MEng *Cantab*; DPhil *Oxon*
Bayesian Inference; Bayesian Nonparametrics; Model Selection; Causal Inference

Dr. Y. GU

BS *USTC*; PhD *N Carolina*
Survival Analysis; Non- and Semi-Parametric Inference; Biostatistics; Alzheimer's Disease; Infectious Disease; Cancer

Dr. K. HAN

PhD *HK*
Computer Vision; Machine Learning; Deep Learning

Dr. Marius HOFERT

MSc *Syracuse*; Dipl.-Math. oec., Dr. rer. nat. *Ulm*
Dependence Modeling; Computational Statistics; Data Science; Quantitative Risk Management

Dr. C.W. KWAN

BSc, PhD *HK*
Influential Observations; Multivariate Statistics; Non-linear Random Model

Dr. Eddy K.F. LAM

Associate Head (Teaching and Learning)
BA *St. Thomas*; MA *New Brunswick*; PhD *HK*
Survival Analysis; Biostatistics; Public Health; Analysis of Infectious Diseases

Dr. Adela S.M. LAU

BEng *City*; MSc *HK*; PhD *CUHK*
Big Data Analytics and Risk Management; Social Media Analytics; Video Analytics, AI Chatbot; Metaverse; Intelligent Marketing; Business/Health Informatics; Knowledge Management and IS Adoption; E-business Strategies and Applications

Dr. David LEE

BSc(ActuarSc), MPhil *HK*; PhD *British Columbia*; ASA
Copula Modelling; Extreme Value Theory; High-dimensional Dependence Structures; Multivariate Tail Dependence

Professor Stephen M.S. LEE Interim Head of Department

BA, PhD *Cantab*
Bootstrap; Resampling Methods; Statistical Theory; Asymptotics and Applications

Dr. Eric A.L. LI

BSc *HK*; MEcon, PhD *Syd*
Real Option Theory and Applications; Resource Economics; Quantitative Trading; Quantum Computing, Blockchain and Smart Contracts

Professor G.D. LI

Associate Head (Research)
BSc, MSc *Peking*; PhD *HK*
Time Series Analysis; Financial Econometrics; Quantile Regression; High Dimensional Data Analysis; Machine Learning

Dr. W.Y. LI

BSc, BEc, MEc *SWUFE*; PhD *UWaterloo*
Actuarial Science; Insurance Economics; Mathematical Finance

Dr. L.Q. QU

BEng *CSU*; PhD *UCAS, CityU*
AI in Healthcare; Medical Image Processing; Illumination Modeling; Deep Learning

Dr. C. WANG

PhD *NUS*
Random Matrix Theory; Time Series Analysis; High-dimensional Data Analysis

Dr. K.P. WAT

BSc(ActuarSc), PhD *HK*; SFHEA; FSA; FASHK; CERA; FRM
Actuarial Science; Financial Mathematics; Insurance Risk Models; Financial Risk Analysis; Enterprise Risk Management

Dr. L.Q. YU

BEng *ZJU*; PhD *CUHK*
Medical Image Analysis; Machine Learning; Computer Vision; Clinical NLP; AI in Healthcare

Professor K.C. YUEN

BSc, MSc, PhD *Calgary*; ASA
Insurance Risk Modelling; Financial Risk Analysis; Survival Analysis

Dr. Dora Y. ZHANG

BSc *Nankai*; MSc, PhD *NCSU*
Big Data Analytics; Bayesian Methods; Biostatistics; Statistical Genetics; Bioinformatics; Public Health and Biomedical Research

Dr. Michael M.Y. ZHANG

BS *UCSB*; MS, PhD *UT Austin*
Machine Learning; Bayesian Non-parametrics; Scalable Inference

Dr. Z.Q. ZHANG

BSc *Nankai*; MSc *E China Normal*; PhD *HK*
Time Series Analysis; Extreme Value Theory; Insurance Risk Modelling; Machine Learning






Dr. K. ZHU

BSc *USTC*; PhD *HKUST*
Time Series Analysis; Econometrics; Causal Inference

Admissions Requirements

JUPAS Stream

Minimum level required for JUPAS candidates:

 English Language*	Level 3
 Chinese Language	Level 3
 Mathematics*	Level 4
 Citizenship and Social Development/ Liberal Studies	Attained/ Level 2
 Elective Subjects: Category A subjects and Extended Module 1 or 2 in Mathematics (M1/M2)	Level 4 in M1/M2* Level 3 in 1 elective subject

* These subjects will be given a weighting of 1.2

Admissions Formula

The programme will consider admissions based on the best 5 HKDSE subjects. The best 5 subjects must include English Language, Mathematics, Extended Modules 1 or 2 in Mathematics (M1/M2), plus the best two among the remaining Category A subjects.

NON-JUPAS Stream

Students holding
non-HKDSE qualifications are
considered individually.

More Information

For more information, please visit our website:

<https://saasweb.hku.hk/programme/as.php>



<https://saasweb.hku.hk>



<https://www.facebook.com/hkustatisticsactuarialscience>



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HKU Science

