History
of the
Bachelor of Science in Actuarial Science Programme
(HKU programme code: 6729)

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 2017 totalled 79 in the four-year programme. The HKU Actuarial Science programme continues to rank amongst the top of the quantitative undergraduate programmes in Hong Kong in terms of average JUPAS admission quality since 1996.
Only Programme of its Kind in Hong Kong

The HKU Bachelor of Science in Actuarial Science programme is the only programme of its kind in Hong Kong. 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.

Admission Requirements

JUPAS Stream
Minimum level required for JUPAS candidates:
  English Language*: 3
  Chinese Language: 3
  Mathematics Compulsory Part*: 4
  Mathematics Extended Module 1 or 2*: 4
  Liberal Studies: 2
  Two Electives: 3
*Double weighting will be given to these subjects

Non-JUPAS Stream
Students holding non-HKDSE qualifications are considered individually.

More Information
Please visit the University's website (https://www.aal.hku.hk/admissions/) or the Faculty of Science's website (https://www.scifac.hku.hk/).
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, risk management, health care, pension plans, and asset/liability management. 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

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 because Hong Kong does not have its own set of actuarial examinations. The average period of time needed to obtain the necessary titles ranges from three to nine years. The relevant professional organisations are shown below.

Institute and Faculty of Actuaries, UK
www.actuaries.org.uk

Society of Actuaries, US
www.soa.org

Casualty Actuarial Society, US
www.casact.org

Institute of Actuaries of Australia
www.actuaries.asn.au

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.

Details of such arrangements can be found at the Department of Statistics and Actuarial Science’s website (https://saasweb.hku.hk/current/as.php).
University Educational Aims

To enable our students to develop capabilities in:

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

(2) tackling novel situations and ill-defined problems

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

(4) intercultural understanding and global citizenship

(5) communication and collaboration

(6) 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

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

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 Courses (60 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT1101</td>
<td>Introduction to financial accounting</td>
<td></td>
</tr>
<tr>
<td>ECON1210</td>
<td>Introductory microeconomics</td>
<td></td>
</tr>
<tr>
<td>ECON1220</td>
<td>Introductory macroeconomics</td>
<td></td>
</tr>
<tr>
<td>MATH1821</td>
<td>Mathematical methods for actuarial science I</td>
<td>42</td>
</tr>
<tr>
<td>MATH2822</td>
<td>Mathematical methods for actuarial science II</td>
<td></td>
</tr>
<tr>
<td>STAT2901</td>
<td>Probability and statistics: foundations of actuarial science</td>
<td></td>
</tr>
<tr>
<td>STAT2902</td>
<td>Financial mathematics</td>
<td>18</td>
</tr>
<tr>
<td>Other elective / common core / language courses</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Year 2 Courses (60 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP1117</td>
<td>Computer programming</td>
<td></td>
</tr>
<tr>
<td>STAT3901</td>
<td>Life contingencies I</td>
<td></td>
</tr>
<tr>
<td>STAT3902</td>
<td>Statistical models</td>
<td></td>
</tr>
<tr>
<td>STAT3903</td>
<td>Stochastic models</td>
<td>42</td>
</tr>
<tr>
<td>STAT3904</td>
<td>Corporate finance for actuarial science</td>
<td></td>
</tr>
<tr>
<td>STAT3905</td>
<td>Introduction to financial derivatives</td>
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</tr>
<tr>
<td>STAT3907</td>
<td>Linear models and forecasting</td>
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</tr>
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<td>Other elective / common core / language courses</td>
<td>18</td>
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</tr>
</tbody>
</table>

### Year 3 Courses (60 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>STAT3906</td>
<td>Risk theory I</td>
<td></td>
</tr>
<tr>
<td>STAT3908</td>
<td>Credibility theory and loss distributions</td>
<td></td>
</tr>
<tr>
<td>STAT3909</td>
<td>Life contingencies II</td>
<td>30</td>
</tr>
<tr>
<td>STAT3910</td>
<td>Financial economics I</td>
<td></td>
</tr>
<tr>
<td>STAT4904</td>
<td>Statistical learning for risk modelling</td>
<td></td>
</tr>
<tr>
<td>Other elective / common core / language courses</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

### Year 4 Courses (54 credits)

At least 12 credits selected from the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT3911</td>
<td>Financial economics II</td>
<td></td>
</tr>
<tr>
<td>STAT3951</td>
<td>Further topics in contingencies</td>
<td></td>
</tr>
<tr>
<td>STAT3953</td>
<td>Fundamentals of actuarial practice</td>
<td></td>
</tr>
<tr>
<td>STAT3954</td>
<td>Current topics in actuarial science</td>
<td></td>
</tr>
<tr>
<td>STAT3955</td>
<td>Survival analysis</td>
<td></td>
</tr>
<tr>
<td>STAT3956</td>
<td>Pension funds and pension mathematics</td>
<td></td>
</tr>
<tr>
<td>STAT4607</td>
<td>Credit risk analysis</td>
<td></td>
</tr>
<tr>
<td>STAT4608</td>
<td>Market risk analysis</td>
<td></td>
</tr>
<tr>
<td>STAT4901</td>
<td>Risk theory II</td>
<td></td>
</tr>
<tr>
<td>STAT4902</td>
<td>Selected topics in actuarial science</td>
<td></td>
</tr>
<tr>
<td>STAT4903</td>
<td>Actuarial techniques for general insurance</td>
<td></td>
</tr>
<tr>
<td>Other elective / common core / language courses</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

### Capstone Requirement (6 credits)

At least 6 credits selected from the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT4711</td>
<td>Capstone experience for actuarial science undergraduates</td>
<td>6</td>
</tr>
<tr>
<td>STAT4767</td>
<td>Actuarial science internship</td>
<td></td>
</tr>
<tr>
<td>STAT4798</td>
<td>Statistics and actuarial science project</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
1. Students are expected to be in full-time status for eight academic semesters (in addition to their six-month or longer full-time internships) in order to fulfill the degree requirements.
2. Students may optionally take Majors or Minors outside the BSc(ActuarSc) programme, provided that they fully satisfy the requirements (except for the Minor in Actuarial Studies).
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.

“In awarding CAE status, the CEC would like to commend HKU on its extremely prolific actuarial research record with publications in many of the top actuarial journals by several actuarial faculty members. Also worthy of high praise is HKU’s excellent quality of graduates with regard to job placement, professional exam pass rates, and the number of students achieving professional actuarial credentialed status. Integration of business courses, an active student society, and a very strong connection to industry are among the exceptional qualities of the HKU actuarial science program and are instrumental in positioning its students for success.”
SOA CAE Evaluation Committee
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 32 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.aspx.

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

Actuarial University Ranking

HKU is ranked No. 1 in Asia and No. 10 worldwide according to a scientific paper entitled “A Digital Picture of the Actuarial Research Community” by Christian Genest & Alberto Carabarrín-Aguirre published in the North American Actuarial Journal (2013, vol. 17:1, pages 3-12), in terms of publication pages in the actuarial journals of their study over a 30-year period from 1982 to 2011.

Accreditation

An agreement was signed between the Department of Statistics and Actuarial Science and the UK’s Institute and Faculty of Actuaries (IFoA) to accredit the BSc(ActuarSc) programme for IFoA subjects CT1-CT8. The programme is the first actuarial programme in Asia to obtain such accreditation from the IFoA.

According to the agreement, students who graduate with a BSc(ActuarSc) degree from HKU with the required marks in specified courses will be exempted from taking IFoA subjects CT1-CT8 as they begin their journey towards qualifying as an actuary.

The Department is in coordination with the IFoA regarding the new curricular structure and new subject exemption in the meantime.
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 and our postgraduate 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. As an intern, a student gains insights into the challenging world and daily activities of an actuary while enhancing his/her technical, analytical and communication skills.

FOK Chi Man Gigi
2015 BSc(Actuarial Science) graduate
Actuarial Intern at Prudential Assurance Company (Hong Kong), 2013

“I really advocate the idea of participating in an internship. First, it is a trend for Actuarial Science students to join an internship programme, as internship experience will definitely be a noteworthy item on a CV. Second, an internship is a golden opportunity for learning and equipping ourselves for our future work path. Frankly speaking, much of the knowledge and many of the skills involved in the workplace cannot be taught in the classroom, but only learnt through work experience, such as soft skills and problem-solving skills applicable in the workspace. In particular, an internship can help us adopt a new learning method that is no longer confined to reading notes and manuals within the syllabus. Instead, it is a process of exploring information from a very large database, asking relevant questions and thinking logically. Most importantly, it is enjoyable to spend time with colleagues sharing the joys of daily life and learning from role models.”

LEUNG Wales
2015 BSc(Actuarial Science) graduate
Actuarial Intern at ACE Life Insurance Co. Ltd., 2013
Actuarial Intern at Aon Benfield, 2014

“My past four years in HKU Actuarial Science were fruitful and unforgettable. Not only is the curriculum well-structured in a progressive manner but the courses are also taught by distinguished scholars specialising in different areas of Actuarial Science with the most up-to-date pedagogy and research findings. As the actuarial theories are taught with emphases on application, the knowledge I learnt is always useful when I need to tackle problems at work.

Beyond regular classroom learning, I also had chances to learn different practices and the latest developments in the industry through participating in actuarial internships in well-known insurance corporations, attending seminars given by famous actuaries and joining workshops conducted by our experienced alumni.”
Partial list of companies participating in the Department’s internship programme:

- AIA Group Limited (友邦)
- AXA Insurance (安盛)
- BOC Group Life Assurance (中銀)
- HSBC Life (匯豐)
- Manulife (宏利)
- Sun Life Financial (永明金融)
- Prudential (保誠)
- Willis Towers Watson (韋萊錡悅)
- General Re (通用再保險)
- RGA Reinsurance (美國再保險)
- JP Morgan (摩根大通)
- Standard Chartered (渣打)
- Ageas Insurance (富通)
- Ernst and Young (安永)
- Mercer (美世)
- Goldman Sachs (高盛)
- Morgan Stanley (摩根士丹利)
- Deloitte Touche Tohmatsu (德勤)
- HKSAR Government (香港特別行政區政府)

For details about our Internship Programme, please visit: https://saasweb.hku.hk/teaching/internship-details.php

YEUNG Shu Nga
2018 BSc(Actuarial Science) graduate
Actuarial Intern at Swiss Reinsurance Company Ltd (Hong Kong Branch), 2016

"Internship is indeed an essential experience in university life, especially for students who plan to pursue a profession after graduation. Being an actuarial science student, like many others who share the same major, I joined the internship programme to work as an Actuarial Intern in the insurance world. Having the opportunity to perform pricing in Swiss Re, a reinsurance company, I was able to consolidate my actuarial knowledge learned in lectures through integrating it to my costing work. With hands-on experience working with technical pricing tool and helping to develop new products, I acquired actuarial software skills as well as insurance product knowledge, which can hardly be learned from textbooks. I would strongly recommend actuarial science students to take part in the internship programme, for not only can they gain a more comprehensive view towards the insurance market, but also equip themselves with both hard and soft skills that are critical for standing out in a crowd."

CHENG Wai Yin
2018 BSc(Actuarial Science) graduate
Actuarial Intern at Prudential Corporation Asia, 2016

"The internship programme at Prudential Cooperation Asia provided me with insights into what actuaries actually do in traditional life insurance company. Tasks given to me may not be relevant to my previous lessons but I treat it as an opportunity to learn more. Through different tasks, both my technical skills (use of simple coding, Excel formula, prophet modelling etc.) and soft skills (time management, communication and task responsibility) have been boosted. Besides skills, getting a broader image of the insurance field is something for me to treasure. Seeing a bigger picture let me understand how my work affects others or even the whole team project. Working in a company as a full-time intern is never an easy task, especially when the company is doing real business in which efficiency of work is highly required. The manager is not your teacher that can teach you everything just like at school. You should learn by first trying to solve the problems yourself before seeking any help."
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(Actuarial Science) 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(Actuarial Science) 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.
ZHANG Yi
2016 BSc(Actuarial Science) graduate Exchange at University of Toronto

The four-month exchange passed so quickly, and my life in Canada has now become a precious memory. Looking back to my days in Canada, I feel that an exchange is indeed another kind of learning and that this experience enhanced my personal development. I went to a country I had never been to, and had no friends and relatives there. But by the time I left that country, I had learnt so much more about it that I felt it was just like my second home, and, most importantly, I now had friends there. Because of the exchange, I was far from home and had to live alone. I learned how to cook, how to travel alone, how to make friends with people from different parts of the world and how to integrate into a new environment or a new culture.

This experience has made me an outgoing person and equipped me with international insight. Before the exchange, I was a little bit afraid, afraid of the new life and the new culture in front of me, and worried about whether I could overcome the difficulties that I might encounter. However, at the end of the exchange, I found that I had overcome all of these difficulties and solved all of the problems. I had made it, even better than my in craziest imagination. Thus, I really cherish this experience and feel that every student in HKU should go for an exchange to explore the world and explore yourself.
Many scholarships are available to our 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 Scholarships Fund Award
- CMA and Donors Scholarship
- HKSAR Government Scholarship
- HKU - Notre Dame Scholarships for Student Exchange
- HKU Glass 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
- Hong Kong Federation of Insurers Scholarship
- HSBC Hong Kong Scholarship
- Kai Chong Tong Scholarship
- Lee Shau Kee Scholarships
- Lee Shau Kee Scholarships for Student Enrichment
- Li Po Chun Charitable Trust Fund Undergraduate Scholarship
- Sports Scholarships
- The Bank of East Asia Scholarship

China Life Insurance (Overseas) Scholarship in Actuarial Science

In 2017, China Life Insurance (Overseas) Company Limited kindly pledged 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 Bachelor of Science in Actuarial Science 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, an Advisory Board Member of the BSc in Actuarial Science programme and an Honorary University Fellow of HKU, has generously donated funds to establish the above 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 in Actuarial Science candidates freshly admitted through JUPAS with the most outstanding entrance record. The scholarship is *renewable* based on satisfactory performance in each year of study.

In addition to academic achievement, a candidate’s performance in an interview and need for financial assistance will also be taken into account as helpful supplementary information. 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.

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.

For more details about the Department’s scholarships, please visit: [https://saasweb.hku.hk/programme/scholarship.php](https://saasweb.hku.hk/programme/scholarship.php)

For details about all HKU’s scholarships, please visit: [http://www.scholarships.hku.hk](http://www.scholarships.hku.hk)
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) (in collaboration with CEDARS)
- 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 American International Assurance (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.

**2017 Actuarial Science Graduates**

<table>
<thead>
<tr>
<th>Employment Sectors</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commerce &amp; Industry</td>
<td>100%</td>
</tr>
<tr>
<td>Civil Service</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Salary (Gross Monthly Income)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>HK$22,548</td>
</tr>
<tr>
<td>Median</td>
<td>HK$20,000</td>
</tr>
<tr>
<td>Maximum</td>
<td>HK$62,167</td>
</tr>
<tr>
<td>Minimum</td>
<td>HK$14,000</td>
</tr>
</tbody>
</table>

**Number of Job Offers Received**

- Three or more: 22.0%
- Two: 31.0%
- One: 47.0%
The Statistics and Actuarial Science Society of the Hong Kong University Students’ Union has been serving students of the HKU Department of Statistics and Actuarial Science since its establishment in 1969. Over the years, the Society has grown into a large family with thousands of members.

The Society has dedicated itself to promoting the study of actuarial science, decision analytics, risk management and statistics. 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 Society organises a variety of functions, including the alumni mentorship scheme, annual dinner, annual survey, firm visits and many more. The Society works closely with the Department and serves its members with enthusiasm. We strive in the best interests of our members and aim to ensure they enjoy a fruitful and joyful university life.

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.
Teaching Staff and Their Research Interests

Dr Andréas Benckovás
BSc UBA; MA UAH; MPhil, PhD UC3M
Actuarial Statistics; Longevity Risk

Dr K.C. Cheung
BSc(ActuarSc), PhD HK; ASA
Actuarial Science; Dependent Structures; Stochastic Orders; Risk Measures; Optimal Insurance

Dr Simon K.C. Cheung
BSc HK; MSc ANU; PhD CUHK
Network data analysis; Time series analysis; Text mining social networks

Dr Y.K. Chung
BSc, MPhil CUHK; PhD HK
Bioinformatics; Protein Modelling; Forensic Statistics; Monte Carlo Simulation

Professor Tony W.K. Fung
BScScSc HK; MSc Lond; PhD HK; DIC
Statistical Diagnostics and Robustness; Longitudinal Data Analysis; DNA Profiling and Forensic Statistics; Statistical Genomics

Dr F. Jiang
PhD Rice
Semi-parametric model; Dimension reduction; Survival analysis; Bayesian decision-theoretic model; Adaptive trial design

Dr C.W. Kwan
BSc, PhD HK
Influential Observations; Multivariate Statistics; Non-Linear Random Model

Dr Eddy K.F. Lam
BA St. Thomas; MA New Brunswick; PhD HK
Multivariate Survival Analysis; Semi-Parametric Regression; Medical Statistics

Dr David Lee
BSc(ActuarSc), MPhil HK; PhD British Columbia
Copula modelling; extreme value theory; high-dimensional dependence structures; multivariate tail dependence

Professor Stephen M.S. Lee
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; financial economics; quantitative trading

Dr G.D. Li
BSc, MSc Peking; PhD HK
Time Series Analysis; Financial Econometrics; Quantile Regression; High Dimensional Data Analysis; Machine Learning

Professor W.K. Li
BSc, MA York; PhD W Ont.
Time Series Analysis; Financial Econometrics; Environmental Modelling; Financial Risk Management; Actuarial Applications

Dr W.T. Li
BScUSTC; PhD Rutgers
Computational statistics; Bayesian inference; Generative model and its inference; Nonlinear dynamic model; Asymptotic analysis

Dr Z.H. Liu
ScD Harvard
Statistical inference for massive data; Big Data Analytics; Causal Inference and Mediation Analysis; Mixed Models; Biostatistics

Dr Gilbert C.S. Liu
MScSc Birmingham; MPhil CUHK; PhD HK
Time Series Analysis; State-space Modelling; Environmental Statistics; Financial Time Series and Econometrics

Dr C. Wang
PhD NUS
Time Series Analysis; High Dimensional Data Analysis

Dr K.P. Wat
BSc(ActuarSc), PhD HK; FRM
Actuarial Science; Financial Mathematics; Insurance Risk Models; Financial Risk Analysis; Enterprise Risk Management

Dr Raymond W.L. Wong
BSc, MPhil CUHK; MA, PhD Pittsburg; ASA
Actuarial Science; Errors-in-Variables Regression Models; Monte Carlo Simulations; Robustness Studies and Applications of Asymptotic Theory

Dr J.F. Xu
BScUSTC; MPhil, PhD Columbia
Survival Analysis; Nonparametric and Semiparametric Inference; High-dimensional Data Analysis

Professor H.L. Yang
BSc Inner Mongolia; MMath Waterloo; PhD Alberta; ASA; HonFIA
Actuarial Science; Insurance Risk Models; Mathematical Finance

Professor Jeff J.F. Yao
BSc, MSc, PhD Paris XI
Random Matrix Theory and High-Dimensional Statistics; Inferences for Stochastic Processes and Non-Linear Time Series; Image Analysis using Markovian Spatial Models

Professor G.S. Yin
MA Temple; MSc, PhD N Carolina
Head of Department
AI, Bayesian methods; Big data; Clinical trials; Deep learning; High-dimensional analysis; Machine learning; Survival analysis

Dr Philip L.H. Yu
BSc, PhD HK
Analysis of Ranking Data; Data Mining and Statistical Learning; Text Analytics; Statistical Methods in Finance; Statistical Trading; Quantitative Risk Management; Environmental Statistics

Professor K.C. Yuen
BSc, MSc, PhD Calgary; ASA
Insurance Risk Modelling; Financial Risk Analysis; Survival Analysis

Dr A.J. Zhang
BSc, MPhil HKBU; MSc, PhD Michigan
Quantitative Risk Management; Machine Learning; Experimental Design

Dr Z.Q. Zhang
BSc Nankai; MSc E China Normal; PhD HK
Time Series Analysis; Extreme Value Theory; Insurance Risk Modelling

Dr K. Zhu
BSc USTC; PhD HKUST
Time Series Analysis

The Department of Statistics and Actuarial Science, the University of Hong Kong has always dedicated itself to reaching world-class standards in both research and education and has aspired to be an international centre of excellence since its establishment in 1967.

Over the years, the Department has been successfully granted General Research Fund grants by the University Grants Committee to undertake numerous research projects in statistics and actuarial science. Underpinning this enduring dedication is the Department of Statistics and Actuarial Science’s international profile of scholarship in the foundation of subjects and well-recognised capability in quality frontier research.

According to the Quacquarelli Symonds (QS) World University Rankings by Subject, the University of Hong Kong is amongst the world’s top-ranked universities in the subject of statistics, and its prestigious international standing is helping it go from strength to strength.
Advisory Board Members of Actuarial Science Programme

Mr Alfred C K Cheung  
Deputy Chief Executive  
BOC Group Life Assurance Co, Ltd.

Mrs Estella S F Chiu  
Head of Actuarial Services, ASPAC  
KPMG Advisory (Hong Kong) Limited

Professor Dr Paul Embrechts  
Department of Mathematics  
ETH Zurich, Switzerland

Professor Hans Gerber  
Emeritus Professor of the University of Lausanne  
Honorary Professor of the University of Hong Kong

Mr Dicky Lam  
Chief Actuary & Appointed Actuary  
Actuarial and Finance Department  
Prudential Hong Kong Limited

Dr Patrick S C Poon, SBS  
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Harvest SCP Group Co, Ltd.

Professor Elias Shiu  
Principal Financial Group Foundation Professor  
Department of Statistics and Actuarial Science  
The University of Iowa

Mr Edmund Tse  
Non-Executive Chairman  
AIA Group Limited

Mr Billy Wong  
Wealth Business Leader, HK, China and Korea  
Mercer Hong Kong

External Examiner for BSc in Actuarial Science

Professor Jan Dhaene is currently full professor with the Actuarial Research Group of the Department Accountancy, Finance and Insurance at the Faculty of Business and Economics of KU Leuven. He is also head of the Research Centre Insurance (Actuarial Research Group) at KU Leuven, program director of the Master of Science in Financial and Actuarial Engineering (Faculty of Economics and Business and Faculty of Science, KU Leuven), and head of the division ‘Actuariële Toepassingen voor Verzekeringen-onderneemingen en Pensioenfondsbeheer’, KU Leuven Research and Development (LRD).
ENQUIRIES

Department of Statistics and Actuarial Science
Room 303 (General Office), 3/F, Run Run Shaw Building
The University of Hong Kong, Pokfulam, Hong Kong
Tel: (852) 3917 2466    Fax: (852) 2858 9041
Email: ug_enquiry@saas.hku.hk

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