

6901 Bachelor of Science

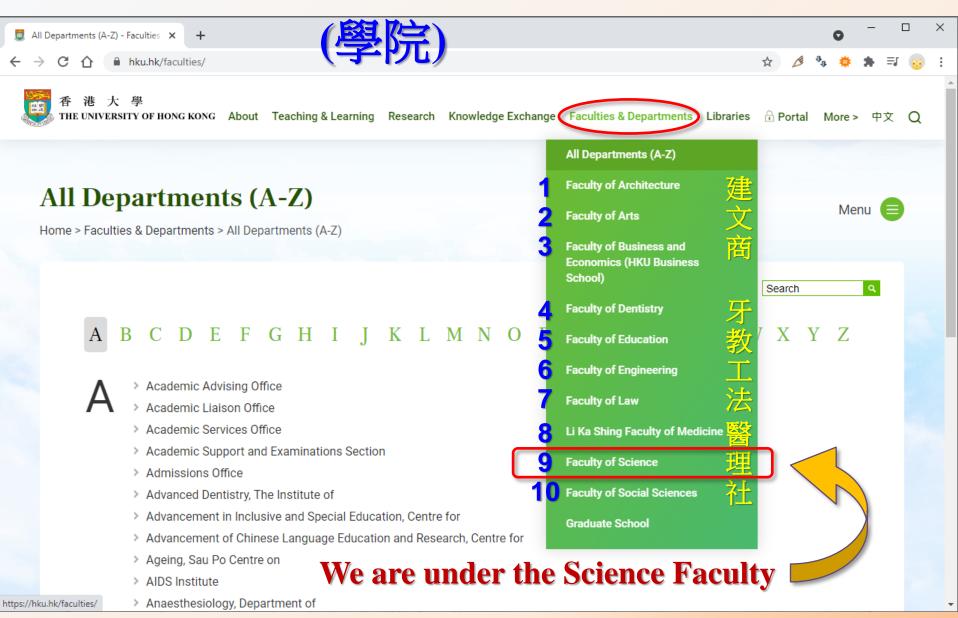
Admissions Talk on BSc Programme Major in Decision Analytics Major in Risk Management Major in Statistics

HKU Information Day 2023 November 28, 2023 (Saturday)



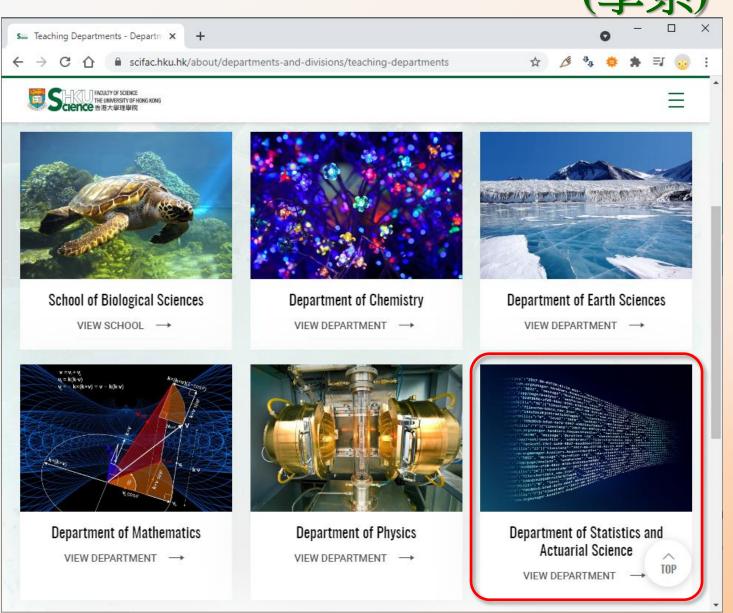


HKU has 10 Faculties + 1 Graduate School



Science Faculty has 6 School/Departments

https://www.scifac.hku.hk/ (can be directed from hku.hk/science)



SAAS Department offers 3 UG programmes





Programmes & Admissions

> Admissions

Undergraduate Programmes:

- Bachelor of Arts and Sciences in Applied Artificial Intelligence (BASc(AppliedAI))
- Bachelor of Science (Major in Decision Analytics) (BSc)
- Bachelor of Science (Major in Risk Management) (BSc)
- Bachelor of Science (Major in Statistics) (BSc)
- Bachelor of Science in Actuarial Science (BSc(ActuarSc))



3 Majors in the BSc Programme

Undergraduate Study

Faculty of Science

- Bachelor of Science (BSc)
 - 14 majors + 7 intensive majors
 - 1 Major / 2 Majors / Major-Minor / Major-2 Minors

Department of Statistics and Actuarial Science

- Major in Decision Analytics
- Major in Risk Management
- Major in Statistics
- Minor in Actuarial Studies
- Minor in Risk Management
- Minor in Statistics

the study of quantitative analysis

Quantitative Analysis

Mathematical foundation (MATH1013, MATH2014)

- Probability distributions (STAT2601)
- Statistical inference (STAT2602)
- Linear modelling (STAT3600)

Quantitative Analysis

Decision Analytics

- Data science
 Machine learning
 Computation-oriented

Risk Management

- Financial modelling
 Risk analysis
 Financial risk-oriented

Statistics

Applied mathematics
 Methodology
 General study, applicable to all quantitative areas

Curricular Structure: DA DEPARTMENT OF STATISTICS AND ACTUARIAL SCIE

21 July 2023

Suggested / Example Structure of BSc (Major in Decision Analytics) Curriculum (for students admitted to Year 1 in 2022 and thereafter)

THE UNIVERSITY OF HONG KONG

Year	One		Two		Three		Four	
Semester	One	ne Two	One	Two	One	Two	One Two	
Disciplinary Core	COMP1117 Computer Programming MATH1013 University Mathematics II	MATH2014 Multivariable Calculus and Linear Algebra STAT2601 Probability and Statistics I	STAT2602 Probability and Statistics II	COMP2119 Introduction to Data Structures and Algorithms STAT3600 Linear Statistical Analysis	MATH3904 Introduction to Optimization STAT3612 Statistical Machine Learning	COMP3278 Introduction to Database Management Systems		STAT4609 Big Data Analytics
Other			COMP2113 Programming Technologies (Pre-requisite of COMP2119)				STAT4766 Statistic STAT4799 Statistic	d Studies in Statistics ne Experience for cs Undergraduates cs Internship cs Project
Disciplinary Elective					At least 12 credits (2 COMP325 COMP327 COMP332 COMP340 STAT3620 STAT3621 STAT3622 STAT3655 STAT4011 STAT4023 STAT4001 STAT4602 STAT4602 STAT4600	 Artificial Intelligence Advanced Database Systems Scientific Computing Modern Nonparametric Statistics Statistical Data Analysis Data Visualization Survival analysis Natural language processing Medical image analysis Time-series Analysis Multivariate Data Analysis 		
Science Foundation Courses	SCNC1111 Scientific Method and Reasoning	SCNC1112 Fundamentals of Modern Science						
Common Core				within the first three y	(
Language		S1000 rsity English oth semesters)	Academic English f or CA Professional & Tech for Mathema	S9820 for Science Students ES9821 nical Communication tical Sciences oth semesters)	CSCI9001 Practical Chinese for Science Students (offered in both semesters)			

Note 1: If there are any courses (offered by SAAS or not) mutually exclusive to any Core courses, students must take the course stated in the curriculum to fulfil the degree requirement of the First Major. Course replacement should only be applied for the other Major(s) or Minor(s).

Note 2: This table is for students' reference only for planning their studies ahead. Course offering semester and availability are subject to changes. Some courses are offered in both semesters. Note 3: Please read the Faculty of Science's Student Handbook and Syllabuses & Regulations for more details.

THE UNIVERSITY OF HONG KONG CUrricular Structure: RM

Suggested / Example Structure of BSc (Major in Risk Management) Curriculum

Year	0	ne	T	wo	Three		Four	
Semester	One	Two	One	Two	One	Two	One	Two
Disciplinary	MATH1013	MATH2014	STAT2601	STAT2602	STAT3600			
Core	University	Multivariable	Probability and	Probability and	Linear Statistical			
	Mathematics II	Calculus and	Statistics I	Statistics II	Analysis			
		Linear Algebra						
	STAT1600			STAT3615	STAT3609			
	Statistics: Ideas			Practical	The Statistics of			
	and Concepts			Mathematics for	Investment Risk			
				Investment				
Disciplinary						east 30 credits (5 courses) selected from the following courses:		
Elective					STAT3603 Stochastic Processes STAT3610 Risk Management and Insurance			
						tatistical Machine Lea		
						erivatives and Risk N		
						urvival analysis		
					STAT3911 Financial Economics II STAT4601 Time carrier analysis			
					STAT4601 Time-series analysis STAT4603 Current Topics in Risk Management			
							Basel Accords in Ban	king and Finance
					STAT4607 C	redit Risk Analysis		0
						farket Risk Analysis		
Capstone						ected from the follow		
						irected Studies in Sta apstone Experience for	or Statistics Undergra	duates (6 credits)
						tatistics Internship (6		duales (0 credits)
						tatistics Project (12 cr		
Science	SCNC1111	SCNC1112						
Foundation	Scientific Method	Fundamentals of						
Courses	and Reasoning	Modern Science						
Common Core		Six o	common core courses	within the first three y	ears			
Language	CAE	S1000	CAE	S9820	CSC	19001		
	Core Univer	rsity English	0		Practical Chinese for	or Science Students		
	(offered in bo	oth semesters)		ES9821 nical Communication	(offered in both semesters)			
				tical Sciences				
			(offered in bo	oth semesters)				

Note 1: If there are any courses (offered by SAAS or not) mutually exclusive to any Core courses, students must take the course stated in the curriculum to fulfil the degree requirement of the First Major. Course replacement should only be applied for the other Major(s) or Minor(s).

Note 2: This table is for students' reference only for planning their studies ahead. Course offering semester and availability are subject to changes. Some courses are offered in both semesters.

Note 3: Please read the Faculty of Science's Student Handbook and Syllabuses & Regulations for more details.

THE UNIVERSITY OF HONG KONG DEPARTMENT OF STATISTICS AND ACT CLUB COLLEGE COLLEGE COLLEGE STRUCTURE: ST Suggested / Example Structure of BSc (Major in Statistics) Curriculum (for students admitted to Year 1 in 2022 and thereafter)

Year	One		Two		Three		Four	
Semester	One	Two	One	Two	One	Two	One	Two
	MATH1013	MATH2014	STAT2601	STAT2602	STAT3600	STAT4602	One	1.40
Disciplinary	University	Multivariable	Probability and	Probability and	Linear Statistical	Multivariate Data		
Core	Mathematics II	Calculus and	Statistics I	Statistics II	Analysis	Analysis		
		Linear Algebra	Statistics I	Statistics II	Anarysis	Filarysis		
	STAT1600	Linear rigeora						
	Statistics: Ideas							
	and Concepts							
Disciplinary					At least 36 credits (6 courses) from Lists A and B, among which at least 18 credit			
Elective					from List A:			
					List A			
						Statistical Inference		
						Stochastic Processes	a	
						Modern Nonparametric		
					STAT3621 Statistical Data Analysis			
					STAT3655 Survival Analysis			
					STAT4601 Time-series Analysis			
					List B STAT2604 Design and Analysis of Experiments			
					STAT3604 Design and Analysis of Experiments STAT3606 Business Logistics			
						Statistics in Clinical M	adiaina and Dia madi	aal Bacaarah
						Statistical Genetics	edicine and Bio-medi	cal Research
						Statistical Machine Lea		
						Marketing Engineering		
						Sample Survey Method		
						Bayesian Learning		
Capstone						elected from the follow	ing courses:	
cupatone						Directed Studies in Sta		
						Capstone Experience for		duates (6 credits)
						Statistics Internship (6		
						Statistics Project (12 cr		
Science	SCNC1111	SCNC1112						
Foundation	Scientific Method	Fundamentals of						
Courses	and Reasoning	Modern Science						
Common Core				within the first three y				
Language	CAES	\$1000	CAE	S9820		CI9001		
	Core Univer			for Science Students	Practical Chinese	for Science Students		
	(offered in bo	oth semesters)		ES9821	(offered in l	both semesters)		
				nical Communication				
				tical Sciences				
			(offered in both semesters)					

Note 1: If there are any courses (offered by SAAS or not) mutually exclusive to any Core courses, students must take the course stated in the curriculum to fulfil the degree requirement of the First Major. Course replacement should only be applied for the other Major(s) or Minor(s).

Note 2: This table is for students' reference only for planning their studies ahead. Course offering semester and availability are subject to changes. Some courses are offered in both semesters.

Note 3: Please read the Faculty of Science's Student Handbook and Syllabuses & Regulations for more details.

Other Graduation Requirements

Other than taking Disciplinary Core and Elective courses

- 3 Language Courses
 - CAES1000 (Year 1)
 - CAES9821 (Year 2)
 - CSCI9001 (Year 3)
- 6 Common Core (CC) Courses
- 1 Capstone Course
 - STAT3799, STAT4799 [Individual Project]
 - STAT4710 [Group Project]
 - STAT4766 [Internship]



Common Core (CC) Courses

- <u>https://commoncore.hku.hk/</u>
- 4 Areas of Inquiry (Aols):
 - Science, Technology and Big Data
 - Arts and Humanities
 - Global Issues
 - China: Culture, State and Society.
- Requirement:
 - Take 6 CC courses, one from each Aol and not more than 2 from any Aol
- Enrollment Statistics:
 - https://sweb.hku.hk/ccacad/ccc_appl/enrol_stat.html





Science, Technology and Big Data

Arts and Humanities





Global Issues

China: Culture, State and Society

Career Prospect



Employment Statistics

Mean Salary	DA	RM	ST	HKU
2019	\$24,759	\$22,658	\$22,277	\$27,175
2020	\$19,625	\$20,435	\$20,950	\$27,956
2021	\$25,977	\$23,070	\$42,067	\$28,921
2022	N/A	\$22,141	\$23,667	\$30,919

DA Job Titles:

- Analyst
- Associate Technical Consultant
- Data Analyst
- Data Governance Officer
- Investment Associate
- Junior Data Scientist
- Software Engineer
- Staff Associate
- Technology Consultant
- Wealth Management Manager

RM Job Titles:

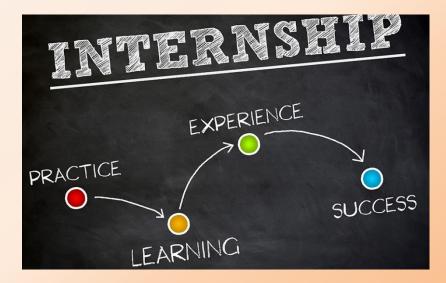
- Actuarial Analyst
- Analyst
- Assistant Dealer
- Assistant Relationship Manager
- Consultant
- Executive Assistant
- Investment Analyst
- Market Risk Trainee
- Operation Officer
- Risk Associate
- Risk Management Officer
- Senior Officer
- Statistical Assistant

ST Job Titles:

- Analyst
- Assistant Manager
- Associate Statistical Analyst
- Backend Software Developer
- Consultant
- Data Analyst
- Developer
- Financial Data Analyst
- Full-time Teacher
- Marketing Analyst Associate
- Research Executive
- Software Engineer
- Teaching Assistant
- Trader



Internship and Career Training



Internship



Internship / Job Online-application System

Departm Statis	nent of 統計及精算學系 tics & Actuarial Science	
Home About	US People Research Study Programmes For St	udents 📔 News & Events 📋 Useful Links
▶ BSc▶ BSc(ActuarSc)	The Internship Programme	Login to Internship/Job Online-application System
 MStat Research Postgraduate Student Internship Student Intranet Scholarships Career Advising Programme (CAP) NEW 	Denefits to Students There is no better training than obtaining solid hands-on experience in the real we purpose. As an intern, the student will gain insight into the challenging we strengthening his/her technical, analytical and communication skills. Under the Internship Programme, BSc(ActuarSc) students, students who declar their First Major, and our postgraduate students are eligible to use the Department internships and other job openings including graduate positions will be posted.	orld and daily activities of an Actuary/Statistician while re Decision Analytics / Risk Management / Statistics as

Our alumni may wish to know that normally they will still be eligible to use the System after graduation from our Department.

> Benefits to Employers

Actuarial Science and Decision Analytics / Risk Managemen / Statistics students at The University of Hong Kong are equipped with a wide spectrum of knowledge and skills:

- · data management, data analysis, statistical modelling;
- loss modelling, actuarial modelling; and
- ability to use software packages: word processing, spreadsheets, VBA, database management, SAS, graphics, PowerPoint presentation.

Actuarial Science and Decision Analytics / Risk Management / Statistics students can contribute to the employer's company in many areas:

Skills and Areas of Knowledge	Typical Job Areas
 financial services and banking insurance pricing and analysis actuarial consulting pension and benefit programme evaluation financial reporting risk analysis 	 data analysis for evaluation of programmes end-user computer support designing worksheets and graphs using PC spreadsheet software financial analysis using actuarial and statistical techniques

Internship / Job Online-application System

	林明
A	100

Department of 統計及精算學系 Statistics & Actuarial Science

Internship / Job Online-application System

P@?

UID :			Major :	Actuarial Scien	ce	
Name :			E-mail :	@hku.hk		
Last Status :	Available working period: From: 2017-07-01 To: 2019-12-31		Contact Phone:			
PPP Score :	Letter & CV Submitted :	0.0	Mock Interview :	0.0	Case Analysis & Presentation :	0.0

Current Job List

Application History • Past Internship/Jobs •

Records shown 1 - 13 of 13 Closing <u>Jobtype</u> Company Name Job Title / Job Description / Form Action date Internship AS&ST Chubb Life Hong Kong Actuarial Interns (Jan-Jun 2018) SP 1114 2017-08-27 Submit completed application via email at @chubb.com AXA China Region Insurance Co Internship AS&ST Intern (Jan-Jun 2018) FL 1138 2017-08-27 APPLY 2017-09-30 APPLY Internship_AS&ST Prudential Hong Kong Limited Actuarial Intern (Jul-Dec 2018) ML 1193 2017-08-20 APPLY Internship_AS&ST AIA Group Actuarial Internship Programme (Jul-Dec 2018) AW 1201 2017-08-27 APPLY Internship_AS Prudential Corporation Asia 3 Actuarial Internships (Jul-Dec 2018) NC 1212 Internship AS&ST Hannover Re Data Analyst Intern/Actuarial Intern (start in mid of Aug) AY 1222 2017-08-13 Submit completed application via email at @hannover-re.com Consultant / Senior Consultant (GRAD) (ASAP) GL 1225 Full-time_AS&ST Deloitte China 2017-08-20 Submit completed application via email at @deloitte.com.hk Internship_ST&AS Swiss Re Intern (ASAP)(6 months) RL1230 2017-08-16 Submit completed application via email at @swissre.com Full-time ST&AS Swiss Re 2018 Graduates Programme(GRAD)(ASAP) RL 1232 2017-09-30 Please apply directly through http://www.swissre.com/ Full-time AS&ST Prudential Corporation Asia Actuarial Assistant (GRAD)(ASAP) NC 1233 2017-08-20 APPLY 2018 C&I Bank Risk Management Summer Analyst Program Please apply directly through 2017-10-29 Internship_ST&AS JP Morgan https://jpmc.recsolu.com/external/reguisitions/XzCM1GKgKa3kd JP 1234 Internship_AS&ST AIA Group Actuarial Audit Internship Programme (Jan-Jun 2018) CL 1235 2017-08-20 APPLY FTLife Insurance Company Full-time AS Actuarial Assistant (GRAD) (ASAP) CC 1236 2017-09-10 Submit completed application via email at @ftlife.com.hk Limited

Change Password Update Contact Phone No. Update Status Logout

Internship / Job Online-application System

	Please read the following terms very carefully and complete the blanks, if applicable, before you submit applications:
	1. If applicable, I have completed my last exchange on yyyy-mm-dd or last internship on yyyy-mm-dd
DECLAR	 Based on my latest available period, from 2017-07-01 to 2019-12-31, I am available for the entire appointment period. If applicable, I have a valid permission to take up this job in accordance to the Immigration Regulations. If I am nominated for the post, I will attend the employer's interview and if applicable, I will accept employer's offer. I will complete the Interview Feedback Form ASAP (but not later than 3 days) after attending the interview and receiving offer. If I decide to decline any possible nomination and job offer, I will notify the Department within 24 hours at internship-job@saas.hku.hk. If applicable, requirements I do not meet include
R A T	(Max. 100 characters). 7. I have provided the latest CV and cover letter tailored to this particular job. 8. If I resign from the position prior to the end date stated in the job description, I will complete Section C of the Interview Feedback Form
i O	within 3 days. 9. Lagree not to send my application directly to the employer without prior consents of my Department.
Ν	10. I taken the course STAT4767 Actuarial Science Internship. If not, I take the course STAT4767 Actuarial Science Internship after I accept an internship position. (This course is required if you want to be regarded as a student intern and exempted from
S	 the Minimum Wage Ordinance). 11. After I accept a full-time internship position that overlaps with the academic school period from September 1 to May 31, I will apply for leave of absence from the Department via the Faculty of Science office as soon as possible. Please note that the Department reserved the right NOT to approve any cancellation for leave of absence that has already been approved. 12. I understand that I may be disqualified for nomination of all prospective internship and graduate job opportunities for any reported violation of the above obligations.

Application Form / Cover Letter (compulsory) If an application form is available, you must submit your filled form as required here.	Choose File No file chosen					
CV / Resume (compulsory)	Choose File No file chosen					
Scanned HKU Transcript / Exam Result (compulsory) Please capture the page which shows ALL your Course Names, Exam Grades and your current CGPA in HKU Portal and then save it as PDF.	Choose File No file chosen					
Other Supporting Document(s)	Choose File No file chosen (combine all relevant supporting documents into one PDF file.)					
PC Skill	(Max. 100 characters)					
Language Skill	DSE English or EquivalentNA •DSE Chinese or EquivalentNA •HKAL English or EquivalentNA •HKAL Chinese or EquivalentNA •HKCEE English or EquivalentNA •HKCEE Chinese or EquivalentNA •					
Apply Cancel						

Professional Preparation Programme (PPP)

- Offered in both semesters
- Series of workshops
- Modules



- Case Analysis & Presentation
 - Provide business cases and real-life situations for your professional analysis
- ***** Group Interview
 - Specialize the skill in collaboration in group presentation, like leadership and organization
- Choosing between Job Offers (for more senior students)
 - Train students on how to assess different offers critically and make a wise decision

Certificate Course in "Essential IT Skills"

- Non-credit bearing
- Offered in June (after Semester 2)
- Senior year students have priority, but Year 1 students are also admitted!
- Contents
 - **♦** *C*++
 - * Excel VBA
 - * SQL
 - * <u>R</u>
 - * Python
 - Project presentation



Career Advising Programme (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
- SAAS Career Fair [Big Event!]



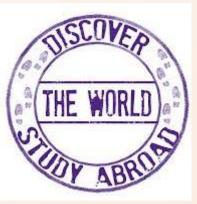


Exchange Experience



Exchange Opportunities

- HKU Worldwide Undergraduate Student Exchange Programme (HKUWW)
 - https://intlaffairs.hku.hk/hku-worldwide-student-exchange
- HKU Summer Institute
 - https://summerinstitute.hku.hk
- Faculty of Science Exchange Programme
 - https://www.scifac.hku.hk/current/ug/el/exchange/facultyexchange-programme





Exchange Credit Transfer

Faculty of Science: Course Equivalence Database

https://webapp.science.hku.hk/student/servlet/course_equiv

For credit transfer reference:

Students on exchange may take courses regarded as equivalent to some HKU courses to fulfill the degree requirement.

COURSE EQUIVALENCE DATABASE

SIS415 THE UNIVERSITY OF HONG KONG FACULTY OF SCIENCE For 4 -Year Curriculum						
Application for Leave of Absence and Transfer of Credits for BSc / BSc / BSc / BSc / Digoing Exchange/Visiting Students						
(Academic Year :)						
IMPORTANT NOTES:						
1. This form should be submitted to the Faculty Office, with all supporting documents attached, at least <u>1 month</u> before the date of departure.						
2. The Dean, on the recommendation of the Department concerned, would consider your application for transfer of credits. Transfer of credits is conditional upon your successful completion of the approved courses.						
3. Stocken should not change the applied list of corrests for correst transfer and the applied approximate rooms at IRRU advanced INUESS type cannot take undo consent(s) (vestuality at year host institution. In such case, year should inform the Faculty by the end of the addition period at your host host indication for any change of your applied list of convess [including applying new context] for eradit transfer, funging applied convel(s) and change of equivalent connuct(s) at IRRU for applied convers(s) for approval by the conditional. Any change is need transfer explosing and the institution. In such case, year should inform the Faculty of the addition period at your applied list of converses [including applying new context] for approval by the conditional.						
4. Credits transferred are not included in the calculation of GPA. Only the examination results obtained from this University will be used to determine the honours classification. The Board meets in late June each year to determine honours classification.						
Part 1: General Information						
Name :						
Intended Major & Minor : <u>Major (S) in (Major 1) (Major 2) Minor (S) in (Minor 1) (Minor 2)</u>						
Contact Telephone Number : Email address : Period of exchange/visiting : [Period of laws of absence to be applied; (MM/YY - MMYY)]						
Host Institution and Country : Duration : _ Lis semester / _ 2nd semester / _ 2nd semester / _ 1 year *						
Part II : Application for Leave of Absence and Credit Transfer (Please /wherever appropriate)						
I wish to apply for leave of absence for my exchangedvisiting period, but do NOT wish to apply for transfer of credits to be taken at the host institution. (Go to Part IV)						
I wish to apply for leave of absence for my exchange/visiting period and wish to apply for transfer of credits to be taken at the host institution. I would like to apply for						
Part III: Course information of host institution ×						
A) The following details are required for the Faculty to process your application for transfer of credits. You may need to contact the host institution for such details.						
Duration of the undergraduate degree curriculum: years Number of semesteryterms in each academic year: Start date of semester/terms						
Number of teaching weeks:in each semester/herm ;in each year Standard semester/herm study load (credit/unit): Number of credits required for graduation (credit/unit):						
Approximate number of contact hours of each credit / unit of course : Deadline of course add/drop period : Expected date of announcement of examination results:						
× Supporting documents (with source link), such as course handbook, syllabuses, from the host institution must be attached, otherwise your application for transfer of credits cannot be processed.						
-1-						

University

18. Canada - University of Toronto

Canad	a - University of Tor	onto				
No.	Partner Code	Partner Credit/Unit	Partner Title	HKU Code	HKU Credit	HKU Title
1.	ACT349H1	0.5	Corporate Finance for Actuarial Science	STAT3904	6	Corporate finance for actuarial science
2.	ACT370H1	0.5	Financial Principles for Actuarial Science II	STAT3910	6	Financial economics I
3.	ACT451H1	0.5	Loss Models	STAT3906	6	Risk theory I
4.	ACT455H1	0.5	Advanced Topics in Actuarial Science	STAT3909	6	Advanced life contingencies
5.	ACT460H1	0.5	Stochastic Methods for Actuarial Science	STAT3911	6	Financial economics II
6.	ACT466H1	0.5	Credibility and Simulation	STAT3908	6	Credibility theory and loss distributions
7.	ACT470H1	0.5	Advanced Pension Mathematics	STAT3956	6	Pension funds and pension mathematics

Career Support and Activities

- Centre of Development and Resources for Students (CEDARS) (www.cedars.hku.hk)
- Prelude to Actuarial Internships and Workplace Etiquette Workshop
- Actuarial Internship Presentation by senior AS students
- Departmental Internship/Job Online-application System
- Career Advising Programme (CAP)
 - © Professional Preparation Programme (PPP)
 - Individual consultation on cover letter, CV and interview skills
 - © Corporate Mentorship Programme (CMP)
 - Output Market information workshop
 - © Firm visits and alumni sharing
 - SAAS Career Fair





Q & A

