Bachelor of Science

(4-year Curriculum)

Major in Risk Management Minor in Actuarial Studies



Life is full of risks, and the risks are costly!



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• A day trader who bought hundreds of oil futures contracts during its historic price crash last month was told he owed \$9 million after a technology issue prevented his trading platform from displaying negative oil prices, <u>Bloomberg reported on Friday</u>.



Q: Can the stock price be predicted?

A: It is predicted only when the market is not efficient. ----- by E. Fama (Nobel Laureate in Economics 2013)

Investment Banking Functions



Q: What happened if the stock market fused four times in a single month?

> Crazy but true!

A: Stress testing by using scenario analysis.



What do we need from your Mathematics?

- Set notation and theory
 Functions (*incl.* limits, continuity)
 Sequences, series
 Basic calculus (*incl.* partial differentiation, double integration)
- Vectors, matrices (basic operations)

 Mathematical background adequate?
 Students must have level 2 or above in HKDSE Extended Module 1 or 2 of Mathematics
 or equivalent

Otherwise, strongly advised to take
MATH1011 University Mathematics I

in Semester 1.

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

Year	O	ne	Two			
Semester	One	Two	One	Two		
Disciplinary Core	MATH1013 University Mathematics II STAT1600 Statistics: Ideas and Concepts	MATH2014 Multivariable Calculus and Linear Algebra	STAT2601 Probability and Statistics I	STAT2602 Probability and Statistics II STAT3615 Practical Mathematics for Investment		
Science Foundation Courses	SCNC1111 Scientific Method and Reasoning	SCNC1112 Fundamentals of Modern Science				
Common Core	Six con	within the first three years				
Language	CAES Core Univer (offered in bo	S1000 sity English oth semesters)	CAES9821 Professional and Technical Communication for Mathematical Sciences (offered in both semesters)			



Major in Risk Management vs Major in Statistics

- All 7 introductory level courses **SAME**
- Advanced level core courses:

<u>2 SAME,</u> <u>2 DIFFERENT</u>

Risk Management –

courses focus primarily on business-related topics: e.g.

investment, insurance, finance, banking, etc.

Statistics –

courses cover wide range of topics with emphasis on "METHODS", their applications, and underlying theory.

- Students <u>CANNOT</u> double major or major/minor in Risk Management & Statistics
- For detailed curriculum structure, please refer to

https://webapp.science.hku.hk/sr4/servlet/enquiry?frmid=MenuP

Reminder

plan ahead

watch out for pre-requisites of individual courses

courses <u>CANNOT</u> be double-counted to fulfill different majors/minors

(exception for double major in Science:

SCNC1111 & SCNC1112 & up to 12 credits of compulsory courses

REQUIRED by both Science majors can be double-counted)

consult course selection advisors if necessary

FRM Exam (Financial Risk Management Certification)







https://www.careercast.com/jobs-rated/2019-jobs-rated-report



Support from University and Department

- HKU : Centre of Development and Resources for Students
 NETmatch, NETjobs, JIJIS (Joint Institutions Job Info. System)
- **Department** : Internship / Job Online Application System

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	← → C û â https://apps.saas.hku.hk/internship/index.php							÷
	Department of 統計及精算學系 Statistics & Actuarial Science							
	UID 2008000001 Name Ugrad Test_Student1		rom: 2010-04-10 Te: 2010-11-30	Ma E-n	or Statistics			
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Dr C W Kwar		EFA	Portfolio Investment Analyst(ASAP) (GRAD/Internship) IR 1452	2019- 08-11	Submit completed application via email at careers@efadrin.com	ה		
<a href="http://www.analytical.com/analytica</th> <th></th> <th>AIA Group</th> <th>Actuarial Internship Programme (Jan-Jun 2020) AW 1526</th> <th>2019- 08-31</th> <th>Submit completed application via email at Rachel-yh chan@ala</th> <th>.com</th> <th></th> <th></th>		AIA Group	Actuarial Internship Programme (Jan-Jun 2020) AW 1526	2019- 08-31	Submit completed application via email at Rachel-yh chan@ala	.com		
<cwkwan@nku.i< th=""><th>IK~</th><td>Blue, trade name of Aviva Life Insurance Co Ltd</td><td>Actuarial Intern (Jan-Jun 2020) MY 1529</td><td>2019- 08-31</td><td>Submit completed application via small at careers@blue.com.h</td><td>k</td><td></td><td></td></cwkwan@nku.i<>	IK~	Blue, trade name of Aviva Life Insurance Co Ltd	Actuarial Intern (Jan-Jun 2020) MY 1529	2019- 08-31	Submit completed application via small at careers@blue.com.h	k		
		CIGNA	Contract Associate. Valuation (IFRS) (ASAP).JC 1629	2019- 08-25	Submit completed application via email at sandy.lau@ciona.com	n		
	Full-time_AS&ST	YF Life Insurance International Ltd	Actuarial Analyst (GRAD)(ASAP) VL 1643	2019-08-18	Submit completed application via email at recruit@vfilfe.com			

Career Development Training

Summer IT course:

Essential IT skills (certificate course)

Career Advising Programme (CAP) to prepare students for:

- internships and job opportunities
- advancing resume and interview skills





- Faculty-sponsored 2-week overseas study exchange tour to France
- o National School for Statistics and Data Analysis
 - Rennes, France
- Ecole nationale de la statistique et de l'analyse de l'information (ENSAI in French)





Minor in Actuarial Studies

Disciplinary E	lective		
Introductory		Advanced	
MATH1013	FINA1310	STAT3615	
STAT2601	STAT2901	STAT3901	STAT3904
STAT2605	STAT2602	STAT3906	STAT3908
		STAT3910	STAT3911
		STAT4903	



Contact Persons

Co-ordinator

∎ Ke Zhu

Course Selection Advisors

■ C W Kwan

■ Stephen M S Lee

■ K Zhu

Tel: 3917 2466

Email: ug_enquiry@saas.hku.hk