BSc in Actuarial Science

Syllabuses and Regulations

2021-2022

Faculty of Science

The University of Hong Kong

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SECTION I Objectives and Learning Outcomes

Degree : Bachelor of Science in Actuarial Science

Objectives : The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes of Actuarial Science Programme

By the end of this programme, students should be able to:

- understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography
 (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- understand and identify the nature of insurance, finance and investment risks
 (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- (3) develop analytical skills to evaluate and measure various kinds of risk, and appraise the related moral and ethical issues
 (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- (4) formulate effective business strategies to manage various kinds of risk
 (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- (5) communicate and collaborate with people effectively on issues related to actuarial science (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses
 (by means of coursework and tutorial classes and/or research-based project in the curriculum)

SECTION II Credit Unit Statement of the BSc(ActuarSc) Degree Curriculum (4-year)

1. General guideline for contact hours requirement in the BSc (Actuarial Science) Degree Curriculum

- (a) A 6-credit course has around 120-180 total study hours, including contact hours, study time, assignment and assessment.
- (b) About 30% of the total study hours are actual contact hours in the form of a class, e.g. lecture hours.
- (c) A 6-credit course has around 36 to 45 lecture hours.
- (d) For lecture-based courses, normally there will be tutorial/discussion sessions.
- (e) For courses employing a non-lecture or lab-based approach, e.g. IT-based or project-based courses, students are expected to devote about 120-180 hours for a 6-credit course.

2. Credit Unit Statement of the BSc (Actuarial Science) Degree Curriculum

The BSc(Actuarial Science) degree curriculum consists of five major types of courses based on the learning activities. The courses in the curriculum are 6 credits. Examples of the contact hours requirements for the five categories of courses are described as follows.

(a) Lecture-based courses (6 credits)

Contact hours: 36 hours of lectures and 12 hours of tutorial/discussion

These courses are taught predominantly by lectures and tutorials. Assessment is by a combination of examination (0-80%) and continuous assessment (20-100%). Continuous assessment tasks include written assignments (totaling no more than 8,000 words) such as essays and project reports, and oral presentations. Details of the assessment tasks can be found in the description of individual courses.

(b) Lecture with laboratory component courses (6 credits)

Contact hours for 6-credit course: 24 hours of lectures, 24 hours of laboratory and 6 hours of tutorial

These courses are taught by a combination of lectures and laboratory/practical sessions. Assessment is by a combination of examination (0-70%) and continuous assessment (30-100%). Continuous assessment tasks include written assignments (totaling no more than 8,000 words) such as essays, laboratory reports, and project reports, and oral presentations. Details of the assessment tasks can be found in the description of individual courses.

(c) Laboratory and Workshop courses (6 credits)

Contact hours: 48 hours of laboratory or workshop and 12 hours of tutorial

These courses aim at enriching the student's research skills and encourage group work through hands-on activities in which science research is introduced. Students are expected to spend an additional 100 hours on self-study, preparation work for the laboratory, and writing reports. Continuous assessment tasks (100%) include written assignments (totaling no more than 8,000 words) such as laboratory report for each experiment (normally no more than 10 experiments) and essays. Details of the assessment tasks can be found in the description of individual courses.

(d) Project-based courses (6 credits)

These courses aim at providing students with an opportunity to pursue their own research interest under the supervision of a teacher. The teacher normally meets with the student weekly to discuss project progress. Assessment task is normally through research reports or a dissertation (totaling no more than 10,000 words for a 6-credit course and 20,000 words for a 12-credit course). Oral presentation will form part of the assessment. Details of the assessment tasks can be found in the description of individual courses.

(e) Internship (6 credits)

Students have to undertake at least 160 hours of internship work

Internships aim to offer students the opportunity to gain work experience related to their major of study. The teacher meets with the student regularly to discuss work progress. Students have to undertake at least 160 hours of internship work arranged formally. Assessment tasks normally include the following outputs: a written report of no more than 2000 words and feedback from the internship supervisor and an oral presentation on students' internship experience. Details of the assessment tasks can be found in the description of individual courses.

List of BSc(ActuarSc) Courses

SECTION III List of BSc(ActuarSc) Courses* on offer in 2021/2022 and 2022/2023^{*}

Course Code	Title	Credit	Pre-requisite	Availa	able in	Semester offered in 2021 - 2022	Exam. held in 2021 - 2022	Quota	Course Coordinator		/ Major (The Major/Minor that th		
				2021 - 2022	2022 - 2023	0=year long 1=1st sem 2=2nd sem S=Summer				Disciplinary Core Course	Disciplinary Elective	Capstone - Disciplinary Core Course	Capstone - Disciplinary Elective
Centre for A	pplied English Studies												
CAES1000	Core University English	6	NIL	Y	Y	1, 2	No exam		Dr P Wong (1st sem); Dr A Yau (2nd sem), English				
CAES9820	Academic English for science students	6	NIL	Y	Y	1, 2	No exam		Mr S D Boynton, English				
CAES9821	Professional and technical communication for mathematical sciences	6	NIL	Y	Y	1, 2	No exam		Mr S D Boynton, English				
School of Cl	ninese	1	•		1		1				1		
CSCI9001	Practical Chinese for science students	6	NIL	Y	Y	1, 2	Dec, May		Mr K W Wong, Chinese				
Department	of Mathematics	•				•	•		•				
MATH1821	Mathematical methods for actuarial science I	6	Level 4 or above in HKDSE Mathematics plus Module 1, or Level 4 or above in HKDSE Mathematics plus Module 2, or equivalent; and Not for students who have passed MATH1013 or (MATH1851 and MATH1053), or have already enrolled in these courses. For BSc(ActuarSc) students only.	Y	Y	1	Dec		Dr C W Wong, Mathematics	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)			
MATH2822	Mathematical methods for actuarial science II	6	Pass in MATH1821. For BSc(ActuarSc) students only.	Y	Y	2	May		Dr T W Ching, Mathematics	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)			
Department	of Statistics & Actuarial Science		1										•
STAT2901	Probability and statistics: foundations of actuarial science	6	Pass in MATH1821 [for BSc(ActuarSc) students] or already enrolled in this course, or Pass in MATH1013 or already enrolled in this course [for students outside the BSc(ActuarSc) programme]; and Not for students who have passed or enrolled in any of these courses: STAT1601, STAT1602, STAT1603, STAT2601	Y	Y	2	Мау		Prof S M S Lee, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	Minor in Actuarial Studies (2020,2019,2018,2017, 2016,2015,2014)		
STAT2902	Financial mathematics	6	Pass in STAT2901, or already enrolled in this course; and Not for students who have passed in STAT3615, or already enrolled in this course.	Y	Y	2	Мау		Prof K C Yuen, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)			
STAT3602	Statistical inference	6	Pass in STAT2602 or STAT3902	Y	Y	1	Dec		Prof S M S Lee, Statistics & Actuarial Science		BSc in Actuarial Science (2017,2016,2015,2014); (Major in Statistics (2021,2020,2019,2018, 2017,2016,2015,2014); Minor in Statistics (2021,2020,2019,2018, 2017,2016,2015,2014)		
STAT3612	Statistical machine learning	6	Pass in STAT2602 or (STAT1603 and any University level 2 course) or STAT3902; and	Y	Y	1	No exam		Dr C Wang, Statistics & Actuarial Science	Bachelor of Arts and Sciences in Applied Artificial Intelligence	BSc in Actuarial Science (2017,2016,2015,2014)		

* This list only includes courses offered by the Department of Statistics & Actuarial Science and the Department of Mathematics and language courses. ^ Availability of courses in 2022-2023 is subject to change.

			Pass in STAT3600 or STAT3907, or already enrolled in these courses; and Not for students who have passed in STAT4904, or already enrolled in this course; and Not for BSc(Actuarial Science) students. BSc(Actuarial Science) students are advised to take STAT4904 Statistical learning for risk modelling instead.							(2021,2020,2019); Major in Decision Analytics (2021,2020,2019,2018, 2017,2016,2015,2014)	: Major in Risk Management (2021,2020,2019,2018, 2017,2016,2015,2014); Major in Statistics (2021,2020,2019,2018, 2017,2016,2015,2014); Minor in Risk Management (2021,2020,2019,2018, 2017,2016,2015,2014); Minor in Statistics (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT3616	Advanced SAS programming	6	Pass in STAT2601 or STAT2901 (Students are strongly recommended to take STAT2603 or STAT2604 prior to taking this course.)	Ν	Ν			50	TBC, Statistics & Actuarial Science		BSc in Actuarial Science (2017,2016,2015,2014) ; Major in Decision Analytics (2017,2016,2015,2014) ; Major in Statistics (2017,2016,2015,2014) ; Minor in Statistics (2017,2016,2015,2014)	
STAT3901	Life contingencies I	6	(Pass in STAT2602 and STAT3615) or (Pass in STAT2902 and (Pass in STAT3902 or already enrolled in this course)) or (Pass in STAT2602 and STAT2902)	Y	Y	1	Dec		Prof K C Yuen, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	Minor in Actuarial Studies (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT3902	Statistical models	6	Pass in STAT2901; and Not for students who have passed in STAT2602, or already enrolled in this course; and For BSc(Actuarial Science) students only.	Y	Y	1	Dec		Dr J F Xu, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)		
STAT3903	Stochastic models	6	Pass in STAT2901; and Not for students who have passed in MATH3603, or have already enrolled in this course; and Not for students who have passed in STAT3603, or have already enrolled in this course; and For BSc(Actuarial Science) students only.	Y	Y	2	May		Dr K Zhu, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)		
STAT3904	Corporate finance for actuarial science	6	[(Pass in ACCT1101 and STAT2902) or (Pass in STAT3610 and STAT3615)]; and Not for students who have passed in FINA1310, or have already enrolled in this course.	Y	Y	2	Мау		Dr D Lee, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	Minor in Actuarial Studies (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT3905	Introduction to financial derivatives	6	Pass in STAT2902; and Not for students who have passed in STAT3618, or have already enrolled in this course; and Not for students who have passed in FINA2322, or have already enrolled in this course; and For BSc(Actuarial Science) students only.	Y	Y	1	Dec		Dr K C Cheung, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)		
STAT3906	Risk theory I	6	Pass in STAT3903, or already enrolled in this course; or Pass in MATH3603 or STAT3603	Y	Y	1	Dec		Dr K C Cheung, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	Minor in Actuarial Studies (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT3907	Linear models and forecasting	6	Pass in STAT2602 or STAT3902, or	Y	Y	2	May		Prof G Li, Statistics &	BSc in Actuarial		

			already enrolled in this course; and Not for students who have passed in STAT3600, or have already enrolled in this course; and Not for students who have passed in STAT4601, or have already enrolled in this course; and Not for students who have passed in ECON2280, or have already enrolled in this course; and For BSc(Actuarial Science) students only.					Actuarial Science	Science (2021,2020,2019,2018, 2017,2016,2015,2014)		
STAT3908	Credibility theory and loss distributions	6	Pass in STAT2602 or STAT3902 or STAT3906	Y	Y	2	Мау	 Dr K C Cheung, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	Minor in Actuarial Studies (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT3909	Life contingencies II	6	Pass in STAT3901, or already enrolled in this course; and For BSc(Actuarial Science) students only.	Y	Y	2	Мау	 Dr D Lee, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)		
STAT3910	Financial economics I	6	Pass in STAT2602 or STAT3902; and Not for students who have passed in STAT3618, or have already enrolled in this course; and Not for students who have passed in FINA2322, or have already enrolled in this course.	Y	Y	1	Dec	 Prof H L Yang, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	Minor in Actuarial Studies (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT3911	Financial economics II	6	Pass in MATH3603 or STAT3603 or STAT3903 or STAT3910	Y	Y	2	May	 Prof H L Yang, Statistics & Actuarial Science	BSc in Actuarial Science (2017,2016,2015,2014)	BSc in Actuarial Science (2021,2020,2019,2018) ; Major in Risk Management (2021,2020,2019,2018, 2017,2016,2015,2014); Minor in Actuarial Studies (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT3951	Further topics in contingencies	6	Pass in STAT3909; and Pass in STAT3910, or already enrolled in this course; and For BSc(Actuarial Science) students only.	Y	Y	1	Dec	 Dr D Lee, Statistics & Actuarial Science		BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT3952	Investment and asset management	6	Pass in STAT3901; and Not for students who have passed in FINA2320, or have already enrolled in this course; and For BSc(Actuarial Science) students only.	N	N			 TBC, Statistics & Actuarial Science			
STAT3953	Fundamentals of actuarial practice	6	Pass in STAT3901.	Y	Y	1	No exam	 Dr A G Benchimol, Statistics & Actuarial Science		BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014); Minor in Actuarial Studies (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT3954	Current topics in actuarial science	6	Pass in STAT3901, or already enrolled in this course; or Pass in STAT3909, or already enrolled in this course; and For BSc(Actuarial Science) students only.	N	Ν			 TBC, Statistics & Actuarial Science		BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT3955	Survival analysis	6	Pass in STAT3902, or already enrolled	N	N			 Dr J F Xu, Statistics &		Bachelor of Arts and	

			in this course; or Pass in STAT3600 or STAT3901; Not for students who have passed in STAT3955, or already enrolled in this course.						Actuarial Science		Sciences in Applied Artificial Intelligence (2019); BSc in Actuarial Science (2019,2018,2017,2016, 2015,2014); Major in Statistics (2019,2018,2017,2016, 2015,2014); Minor in Statistics (2019,2018,2017,2016, 2015,2014)	
STAT3956	Pension funds and pension mathematics	6	Pass in STAT3909; and For BSc(Actuarial Science) students only.	Y	Y	1	Dec		Prof G Ma, Statistics & Actuarial Science		BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT4602	Multivariate data analysis	6	Pass in STAT3600 or STAT3907	Y	Y	2	Мау	50	Prof T W K Fung, Statistics & Actuarial Science	Major in Statistics (2021,2020,2019,2018, 2017,2016,2015,2014)	Bachelor of Arts and Sciences in Applied Artificial Intelligence (2021,2020,2019); BSc in Actuarial Science (2017,2016,2015,2014); Major in Decision Analytics (2021,2020,2019,2018, 2017,2016,2015,2014); Minor in Statistics (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT4607	Credit risk analysis	6	Pass in STAT3618 or STAT3905 or STAT3910 or (FINA2322 and any University level 3 course)	Y	Y	2	May		Dr K P Wat, Statistics & Actuarial Science		BSc in Actuarial Science (2019,2018,2017,2016, 2015,2014); Major in Risk Management (2021,2020,2019,2018, 2017,2016,2015,2014); Minor in Risk Management (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT4608	Market risk analysis	6	Pass in STAT3907 and STAT3910; or Pass in STAT4601 and (FINA2320 or STAT3609)	Y	Y	2	Мау		Dr K Zhu, Statistics & Actuarial Science		BSc in Actuarial Science (2019,2018,2017,2016, 2015,2014); Major in Risk Management (2021,2020,2019,2018, 2017,2016,2015,2014); Minor in Risk Management (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT4711	Capstone experience for actuarial science undergraduates	6	Pass in at least 24 credits of advanced level disciplinary core/elective courses in BSc(Actuarial Science) programme including (Pass in STAT3901, or already enrolled in this course; or Pass in STAT3909, or already enrolled in this course); and This capstone course is only for BSc (Actuarial Science) students, and is mutually exclusive with STAT4767 and STAT4798. The earliest that a student is allowed to take this capstone course is their year 3 study.	Y	Y	1, 2	No exam	50	Prof G Yin, Statistics & Actuarial Science			BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)

STAT4767	Actuarial science internship	6	Pass in at least 24 credits of advanced level disciplinary core/elective courses in BSc(Actuarial Science) programme including STAT3901; and This capstone course is only for BSc (Actuarial Science) students; and is mutually exclusive with STAT4711. The earliest that a student is allowed to take this capstone course is their year 3 study.	Y	Y	1, 2	No exam		Dr K P Wat, Statistics & Actuarial Science			BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)
STAT4798	Statistics and actuarial science project	6	Pass in at least 24 credits of advanced level disciplinary core/elective courses in BSc(Actuarial Science) programme including STAT3902 and STAT3907; and Pass or already enrolled in at least one of the following courses: STAT3911, STAT4602, STAT4904; and This capstone course is only for BSc (Actuarial Science) students; and subject to the consent of course coordinator. This course is mutually exclusive with STAT4711. The earliest that a student is allowed to take this capstone course is their year 3 study.	Y	Y	1, 2	No exam	50	Prof S M S Lee, Statistics & Actuarial Science			BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)
STAT4901	Risk theory II	6	Pass in STAT3906	N	N				TBC, Statistics & Actuarial Science		BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT4902	Selected topics in actuarial science	6	Pass in STAT3906	Y	N	2	Мау		Dr J T Y Wong, Statistics & Actuarial Science		BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT4903	Actuarial techniques for general insurance	6	Pass in STAT3906	Y	Y	1	Dec		Dr A G Benchimol, Statistics & Actuarial Science		BSc in Actuarial Science (2021,2020,2019,2018, 2017,2016,2015,2014); Minor in Actuarial Studies (2021,2020,2019,2018, 2017,2016,2015,2014)	
STAT4904	Statistical learning for risk modelling	6	Pass in STAT3907 or STAT3600; and Not for students who have passed in STAT3612, or already enrolled in this course; and For BSc(Actuarial Science) students only.	Y	Y	2	Мау		Dr C Wang, Statistics & Actuarial Science	BSc in Actuarial Science (2021,2020,2019,2018)	BSc in Actuarial Science (2017,2016,2015,2014)	
STAT7609	Research methods in statistics	6	Pass in STAT3600 or STAT3907	Y	Y	1	Dec		Prof J J F Yao, Statistics & Actuarial Science			
STAT7610	Advanced probability	6	Pass in STAT3603 or STAT3903	Y	Y	1	Dec		Prof H L Yang, Statistics & Actuarial Science			
STAT7611	Computational statistics	6	Pass in STAT3600 or STAT3907	Y	Y	1	Dec		Prof G Yin, Statistics & Actuarial Science			
STAT7614	Advanced statistical modelling	6	Pass in STAT3600 or STAT3907	Y	Y	1, 2	Dec, May		Prof G Yin, Statistics & Actuarial Science			
STAT7615	Advanced quantitative risk management and finance	6	Pass in STAT4608	Y	N	2	May		Dr Z Zhang, Statistics & Actuarial Science			

SECTION IV Equivalency of HKDSE and other qualifications

HEDGE	Caral	Equivalent Qualification to HKDSE					
HKDSE	Grade	IB	GCE	SATII	AP	Gao Kao (高考)	
Biology	3 or above	Biology (SL/HL)	Biology (AL)	Biology	Biology		
Chemistry	3 or above	Chemistry (SL/HL)	Chemistry (AL)	Chemistry	Chemistry		
Physics	3 or above	Physics (SL/HL)	Physics (AL)	Physics	Physics B or C	Equivalent to fulfillment of all	
Mathematics	2 or above	Mathematics (SL)/Mathematical Studies (SL)	Mathematics (AL)	Mathematics Level 1 or 2		HKDSE requirements	
Mathematics + (M1 or M2)	2 or above	Mathematics (HL)/Mathematical Studies (HL)	Pure Mathematics (AL) Further Mathematics (AL)		Calculus AB or BC		

Table of Equivalence between HKDSE and Other Qualifications

Note:

HL: Higher Level

SL: Standard Level

AL: Advanced Level

Remarks:

For science students admitted through non-JUPAS scheme, the equivalent subject qualification(s) to HKDSE, if possessed, can be identified by the SIS for on-line course selection.

For other non-science students admitted through non-JUPAS scheme, they are still required to obtain the approval (written/via email) from the Course Selection Adviser of the course offering department even they have possessed the equivalent HKDSE subject qualification(s) to meet the course prerequisite requirement. Once approval is given, they need to forward it to their home faculties to add the course on-line.

SECTION V BSc(ActuarSc) Programmes on offer in 2021/2022

Programme Title	BSc i
Offered to students	2021

BSc in Actuarial Science

admitted to Year 1 in

Objectives:

The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes:

By the end of this programme, students should be able to:

- PLO 1: understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 2 : understand and identify the nature of insurance, finance and investment risks (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 3: develop analytical skills to evaluate and measure various kinds of risk, and appraise the related moral and ethical issues (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 4 : formulate effective business strategies to manage various kinds of risk (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 5: communicate and collaborate with people effectively on issues related to actuarial science (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 6: discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses (by means of coursework and tutorial classes and/or research-based project in the curriculum)

Impermissible Combinations:

Minor in Actuarial Stud	les	
Required courses	(132 credits)	
1. Year I Courses		
Disciplinary Core C	Courses (42 credits)	
ACCT1101	Introduction to financial accounting (6)	
ECON1210	Introductory microeconomics (6)	
ECON1220	Introductory macroeconomics (6)	
MATH1821	Mathematical methods for actuarial science I (6)	
MATH2822	Mathematical methods for actuarial science II (6)	
STAT2901	Probability and statistics: foundations of actuarial science (6)	
STAT2902	Financial mathematics (6)	
2. Year II Courses		
Disciplinary Core C	Courses (42 credits)	
COMP1117	Computer programming (6)	
STAT3901	Life contingencies I (6)	[previous title: Life contingencies (6)]
STAT3902	Statistical models (6)	
STAT3903	Stochastic models (6)	
STAT3904	Corporate finance for actuarial science (6)	
STAT3905	Introduction to financial derivatives (6)	
STAT3907	Linear models and forecasting (6)	
3. Year III Courses		
	Courses (30 credits)	
STAT3906	Risk theory I (6)	
STAT3908	Credibility theory and loss distributions (6)	
STAT3909	Life contingencies II (6)	[previous title: Advanced life contingencies (6)]
STAT3910	Financial economics I (6)	
STAT4904	Statistical learning for risk modelling (6)	
4. Year IV Courses		
Disciplinary Electiv		
	s selected from the following courses:	
STAT3911	Financial economics II (6)	
STAT3951	Further topics in contingencies (6)	[previous title: Advanced contingencies (6)]
STAT3953	Fundamentals of actuarial practice (6)	
STAT3954	Current topics in actuarial science (6)	
STAT3956	Pension funds and pension mathematics (6)	
STAT4901	Risk theory II (6)	
STAT4902	Selected topics in actuarial science (6)	
STAT4903	Actuarial techniques for general insurance (6)	
5. Capstone Requir	rement (o Credits)	

At least 6 credits selected from the following courses: STAT4711 Capstone experience for actuarial science undergraduates (6) STAT4767

Actuarial science internship (6) **STAT4798**

Statistics and actuarial science project (6)

Notes:

1. Students are expected to be in full-time status for eight academic semesters (in additional to their 6-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.

Remarks:

Programme Title	BSc in Actuarial Science
Offered to students	2020
admitted to Year 1 in	

The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes:

By the end of this programme, students should be able to:

- PLO 1: understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 2: understand and identify the nature of insurance, finance and investment risks (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 3: develop analytical skills to evaluate and measure various kinds of risk, and appraise the related moral and ethical issues (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 4 : formulate effective business strategies to manage various kinds of risk (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 5: communicate and collaborate with people effectively on issues related to actuarial science (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 6: discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses (by means of coursework and tutorial classes and/or research-based project in the curriculum)

Impermissible Combinations:

	5	
Required courses (1	132 credits)	
1. Year I Courses		
Disciplinary Core Co	urses (42 credits)	
ACCT1101	Introduction to financial accounting (6)	
ECON1210	Introductory microeconomics (6)	
ECON1220	Introductory macroeconomics (6)	
MATH1821	Mathematical methods for actuarial science I (6)	
MATH2822	Mathematical methods for actuarial science II (6)	
STAT2901	Probability and statistics: foundations of actuarial science (6)	
STAT2902	Financial mathematics (6)	
2. Year II Courses		
Disciplinary Core Co		
COMP1117	Computer programming (6)	
STAT3901	Life contingencies I (6)	[previous title: Life contingencies (6)]
STAT3902	Statistical models (6)	
STAT3903	Stochastic models (6)	
STAT3904	Corporate finance for actuarial science (6)	
STAT3905	Introduction to financial derivatives (6)	
STAT3907	Linear models and forecasting (6)	
3. Year III Courses		
Disciplinary Core Co		
STAT3906	Risk theory I (6)	
STAT3908	Credibility theory and loss distributions (6)	
STAT3909	Life contingencies II (6)	[previous title: Advanced life contingencies (6)]
STAT3910	Financial economics I (6)	
STAT4904	Statistical learning for risk modelling (6)	
4. Year IV Courses		
Disciplinary Electives	s (12 credits)	
At least 12 credits s	elected from the following courses:	
STAT3911	Financial economics II (6)	
STAT3951	Further topics in contingencies (6)	[previous title: Advanced contingencies (6)]
STAT3953	Fundamentals of actuarial practice (6)	
STAT3954	Current topics in actuarial science (6)	
STAT3956	Pension funds and pension mathematics (6)	
STAT4901	Risk theory II (6)	
STAT4902	Selected topics in actuarial science (6)	
STAT4903	Actuarial techniques for general insurance (6)	
5. Capstone Requirer	nent (6 credits)	

At least 6 credits selected from the following courses: STAT4711 Capstone experience for actuarial science undergraduates (6) STAT4767

Actuarial science internship (6) **STAT4798**

Statistics and actuarial science project (6)

Notes:

1. Students are expected to be in full-time status for eight academic semesters (in additional to their 6-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.

Remarks:

Programme Title	BSc in Actuarial Science
Offered to students	2019
admitted to Year 1 in	

The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes:

By the end of this programme, students should be able to:

- PLO 1: understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 2: understand and identify the nature of insurance, finance and investment risks (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 3: develop analytical skills to evaluate and measure various kinds of risk, and appraise the related moral and ethical issues (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 4 : formulate effective business strategies to manage various kinds of risk (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 5: communicate and collaborate with people effectively on issues related to actuarial science (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 6 : discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses (by means of coursework and tutorial classes and/or research-based project in the curriculum)

Impermissible Combinations:

Required courses	(132 credits)			
1. Year I Courses				
Disciplinary Core C	ourses (42 credits)			
ACCT1101	Introduction to financial accounting (6)			
ECON1210	Introductory microeconomics (6)			
ECON1220	Introductory macroeconomics (6)			
MATH1821	Mathematical methods for actuarial science I (6)			
MATH2822	Mathematical methods for actuarial science II (6)			
STAT2901	Probability and statistics: foundations of actuarial science (6)			
STAT2902	Financial mathematics (6)			
2. Year II Courses				
Disciplinary Core C	ourses (42 credits)			
COMP1117	Computer programming (6)			
STAT3901	Life contingencies I (6)	[previous title: Life contingencies (6)]		
STAT3902	Statistical models (6)			
STAT3903	Stochastic models (6)			
STAT3904	Corporate finance for actuarial science (6)			
STAT3905	Introduction to financial derivatives (6)			
STAT3907	Linear models and forecasting (6)			
3. Year III Courses				
Disciplinary Core C				
STAT3906	Risk theory I (6)			
STAT3908	Credibility theory and loss distributions (6)			
STAT3909	Life contingencies II (6)	[previous title: Advanced life contingencies (6)]		
STAT3910	Financial economics I (6)			
STAT4904	Statistical learning for risk modelling (6)			
4. Year IV Courses	5 5(1)			
Disciplinary Elective	es (12 credits)			
	selected from the following courses:			
STAT3911	Financial economics II (6)			
STAT3951	Further topics in contingencies (6)	[previous title: Advanced contingencies (6)]		
STAT3953	Fundamentals of actuarial practice (6)			
STAT3954	Current topics in actuarial science (6)			
STAT3955	Survival analysis (6)			
STAT3956	Pension funds and pension mathematics (6)			
STAT4607	Credit risk analysis (6)			
STAT4608	Market risk analysis (6)			
STAT4901	Risk theory II (6)			

STAT4902	Selected topics in actuarial science (6)			
STAT4903	Actuarial techniques for general insurance (6)			
5. Capstone Require	ement (6 credits)			
At least 6 credits s	selected from the following courses:			
STAT4711	Capstone experience for actuarial science undergraduates (6)			
STAT4767	Actuarial science internship (6)			
STAT4798	Statistics and actuarial science project (6)			

Notes: 1. Students are expected to be in full-time status for eight academic semesters (in additional to their 6-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.

Remarks:

Programme Title	BSc in Actuarial Science
Offered to students	2018
admitted to Year 1 in	

The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes:

By the end of this programme, students should be able to:

- PLO 1: understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 2 : understand and identify the nature of insurance, finance and investment risks (by means of coursework and tutorial classes and/or research-based project in the curriculum)
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- PLO 6 : discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses (by means of coursework and tutorial classes and/or research-based project in the curriculum)

Impermissible Combinations:

Required courses	(132 credits)				
1. Year I Courses					
Disciplinary Core Co	ourses (42 credits)				
ACCT1101	Introduction to financial accounting (6)				
ECON1210	Introductory microeconomics (6)				
ECON1220	Introductory macroeconomics (6)				
MATH1821	Mathematical methods for actuarial science I (6)				
MATH2822	Mathematical methods for actuarial science II (6)				
STAT2901	Probability and statistics: foundations of actuarial science (6)				
STAT2902	Financial mathematics (6)				
2. Year II Courses					
Disciplinary Core Co	ourses (42 credits)				
COMP1117	Computer programming (6)				
STAT3901	Life contingencies I (6)	[previous title: Life contingencies (6)]			
STAT3902	Statistical models (6)				
STAT3903	Stochastic models (6)				
STAT3904	Corporate finance for actuarial science (6)				
STAT3905	Introduction to financial derivatives (6)				
STAT3907	Linear models and forecasting (6)				
3. Year III Courses					
Disciplinary Core Co					
STAT3906	Risk theory I (6)				
STAT3908	Credibility theory and loss distributions (6)				
STAT3909	Life contingencies II (6)	[previous title: Advanced life contingencies (6)]			
STAT3910	Financial economics I (6)				
STAT4904	Statistical learning for risk modelling (6)				
4. Year IV Courses	3 3(*)				
Disciplinary Elective	es (12 credits)				
	selected from the following courses:				
STAT3911	Financial economics II (6)				
STAT3951	Further topics in contingencies (6)	[previous title: Advanced contingencies (6)]			
STAT3953	Fundamentals of actuarial practice (6)				
STAT3954	Current topics in actuarial science (6)				
STAT3955	Survival analysis (6)				
STAT3956	Pension funds and pension mathematics (6)				
STAT4607	Credit risk analysis (6)				
STAT4608	Market risk analysis (6)				
STAT4901	Risk theory II (6)				

STAT4902	Selected topics in actuarial science (6)	
STAT4903	Actuarial techniques for general insurance (6)	
5. Capstone Require	ement (6 credits)	
At least 6 credits s	selected from the following courses:	
STAT4711	Capstone experience for actuarial science undergraduates (6)	
STAT4767	Actuarial science internship (6)	
STAT4798	Statistics and actuarial science project (6)	

Notes: 1. Students are expected to be in full-time status for eight academic semesters (in additional to their 6-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.

Remarks:

Programme Title	BSc in Actuarial Science
Offered to students	2017
admitted to Year 1 in	

The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes:

By the end of this programme, students should be able to:

- PLO 1: understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography (by means of coursework and tutorial classes and/or research-based project in the curriculum)
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- PLO 6 : discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses (by means of coursework and tutorial classes and/or research-based project in the curriculum)

Impermissible Combinations:

Required courses (138 credits)	
1. Year I Courses		
Disciplinary Core Co	ourses (42 credits)	
ACCT1101	Introduction to financial accounting (6)	
ECON1210	Introductory microeconomics (6)	
ECON1220	Introductory macroeconomics (6)	
MATH1821	Mathematical methods for actuarial science I (6)	
MATH2822	Mathematical methods for actuarial science II (6)	
STAT2901	Probability and statistics: foundations of actuarial science (6)	
STAT2902	Financial mathematics (6)	
2. Year II Courses		
Disciplinary Core Co		
COMP1117	Computer programming (6)	
STAT3901	Life contingencies I (6)	[previous title: Life contingencies (6)]
STAT3902	Statistical models (6)	
STAT3903	Stochastic models (6)	
STAT3904	Corporate finance for actuarial science (6)	
STAT3905	Introduction to financial derivatives (6)	
STAT3907	Linear models and forecasting (6)	
3. Year III Courses		
Disciplinary Core Co		
STAT3906	Risk theory I (6)	
STAT3908	Credibility theory and loss distributions (6)	
STAT3909	Life contingencies II (6)	[previous title: Advanced life contingencies
STAT3910	Financial economics I (6)	(6)]
STAT3911	Financial economics II (6)	
4. Year IV Courses		
Disciplinary Elective	s (18 credits)	
	from List A and List B, with at least 12 credits from List A:	
List A	···· _··· _··· _··· _··· _··· _···	
STAT3951	Further topics in contingencies (6)	[previous title: Advanced contingencies (6)]
STAT3954	Current topics in actuarial science (6)	
STAT3955	Survival analysis (6)	
STAT3956	Pension funds and pension mathematics (6)	
STAT4607	Credit risk analysis (6)	
STAT4608	Market risk analysis (6)	
STAT4901	Risk theory II (6)	
STAT4903	Actuarial techniques for general insurance (6)	

STAT4904	Statistical learning for risk modelling (6)	
List B		
STAT3602	Statistical inference (6)	
STAT3612	Statistical machine learning (6)	[previous title: Data mining (6)]
STAT3616	Advanced SAS programming (6)	
STAT3953	Fundamentals of actuarial practice (6)	
STAT4602	Multivariate data analysis (6)	
STAT4902	Selected topics in actuarial science (6)	
5. Capstone Require	ement (6 credits)	
	elected from the following courses:	
STAT4711	Capstone experience for actuarial science undergraduates (6)	
STAT4767	Actuarial science internship (6)	
STAT4798	Statistics and actuarial science project (6)	

1. Students are expected to be in full-time status for eight academic semesters (in additional to their 6-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.

Remarks:

Programme Title	BSc in Actuarial Science
Offered to students	2016
admitted to Year 1 in	

The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes:

By the end of this programme, students should be able to:

- PLO 1: understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 2 : understand and identify the nature of insurance, finance and investment risks (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 3: develop analytical skills to evaluate and measure various kinds of risk, and appraise the related moral and ethical issues (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 4 : formulate effective business strategies to manage various kinds of risk (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 5: communicate and collaborate with people effectively on issues related to actuarial science (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 6 : discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses (by means of coursework and tutorial classes and/or research-based project in the curriculum)

Impermissible Combinations:

Required courses (138 credits)	
1. Year I Courses		
Disciplinary Core Co	ourses (42 credits)	
ACCT1101	Introduction to financial accounting (6)	
ECON1210	Introductory microeconomics (6)	
ECON1220	Introductory macroeconomics (6)	
MATH1821	Mathematical methods for actuarial science I (6)	
MATH2822	Mathematical methods for actuarial science II (6)	
STAT2901	Probability and statistics: foundations of actuarial science (6)	
STAT2902	Financial mathematics (6)	
2. Year II Courses		
Disciplinary Core Co		
COMP1117	Computer programming (6)	
STAT3901	Life contingencies I (6)	[previous title: Life contingencies (6)]
STAT3902	Statistical models (6)	
STAT3903	Stochastic models (6)	
STAT3904	Corporate finance for actuarial science (6)	
STAT3905	Introduction to financial derivatives (6)	
STAT3906	Risk theory I (6)	
3. Year III Courses		
Disciplinary Core Co		
STAT3907	Linear models and forecasting (6)	
STAT3908	Credibility theory and loss distributions (6)	
STAT3909	Life contingencies II (6)	[previous title: Advanced life contingencies
STAT3910	Financial economics I (6)	(6)]
STAT3910 STAT3911	Financial economics II (6)	
4. Year IV Courses		
Disciplinary Elective	s (18 credits)	
	from List A and List B, with at least 12 credits from List A:	
List A	···· _··· _··· _··· _··· _··· _···	
STAT3951	Further topics in contingencies (6)	[previous title: Advanced contingencies (6)]
STAT3954	Current topics in actuarial science (6)	
STAT3955	Survival analysis (6)	
STAT3956	Pension funds and pension mathematics (6)	
STAT4607	Credit risk analysis (6)	
STAT4608	Market risk analysis (6)	
STAT4901	Risk theory II (6)	
STAT4903	Actuarial techniques for general insurance (6)	

STAT4904	Statistical learning for risk modelling (6)	
List B		
STAT3602	Statistical inference (6)	
STAT3612	Statistical machine learning (6)	[previous title: Data mining (6)]
STAT3616	Advanced SAS programming (6)	
STAT3953	Fundamentals of actuarial practice (6)	
STAT4602	Multivariate data analysis (6)	
STAT4902	Selected topics in actuarial science (6)	
5. Capstone Require	ement (6 credits)	
	elected from the following courses:	
STAT4711	Capstone experience for actuarial science undergraduates (6)	
STAT4767	Actuarial science internship (6)	
STAT4798	Statistics and actuarial science project (6)	

1. Students are expected to be in full-time status for eight academic semesters (in additional to their 6-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.

Remarks:

Programme Title	BSc in Actuarial Science
Offered to students	2015
admitted to Year 1 in	

The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes:

By the end of this programme, students should be able to:

- PLO 1: understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 2 : understand and identify the nature of insurance, finance and investment risks (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 3: develop analytical skills to evaluate and measure various kinds of risk, and appraise the related moral and ethical issues (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 4 : formulate effective business strategies to manage various kinds of risk (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 5: communicate and collaborate with people effectively on issues related to actuarial science (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 6 : discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses (by means of coursework and tutorial classes and/or research-based project in the curriculum)

Impermissible Combinations:

Required courses (138 credits)			
1. Year I Courses			
Disciplinary Core Co	ourses (42 credits)		
ACCT1101	Introduction to financial accounting (6)		
ECON1210	Introductory microeconomics (6)		
ECON1220	Introductory macroeconomics (6)		
MATH1821	Mathematical methods for actuarial science I (6)		
MATH2822	Mathematical methods for actuarial science II (6)		
STAT2901	Probability and statistics: foundations of actuarial science (6)		
STAT2902	Financial mathematics (6)		
2. Year II Courses			
Disciplinary Core Co	ourses (42 credits)		
COMP1117	Computer programming (6)		
STAT3901	Life contingencies I (6)	[previous title: Life contingencies (6)]	
STAT3902	Statistical models (6)		
STAT3903	Stochastic models (6)		
STAT3904	Corporate finance for actuarial science (6)		
STAT3905	Introduction to financial derivatives (6)		
STAT3906	Risk theory I (6)		
3. Year III Courses			
Disciplinary Core Co			
STAT3907	Linear models and forecasting (6)		
STAT3908	Credibility theory and loss distributions (6)		
STAT3909	Life contingencies II (6)	[previous title: Advanced life contingencies	
STAT3910	Financial economics I (6)	(6)]	
STAT3911	Financial economics II (6)		
4. Year IV Courses			
Disciplinary Elective	es (18 credits)		
	from List A and List B, with at least 12 credits from List A:		
List A			
STAT3951	Further topics in contingencies (6)	[previous title: Advanced contingencies (6)]	
STAT3954	Current topics in actuarial science (6)		
STAT3955	Survival analysis (6)		
STAT3956	Pension funds and pension mathematics (6)		
STAT4607	Credit risk analysis (6)		
STAT4608	Market risk analysis (6)		
STAT4901	Risk theory II (6)		
STAT4903	Actuarial techniques for general insurance (6)		

STAT4904	Statistical learning for risk modelling (6)	
List B		
STAT3602	Statistical inference (6)	
STAT3612	Statistical machine learning (6)	[previous title: Data mining (6)]
STAT3616	Advanced SAS programming (6)	
STAT3953	Fundamentals of actuarial practice (6)	
STAT4602	Multivariate data analysis (6)	
STAT4902	Selected topics in actuarial science (6)	
5. Capstone Require	ement (6 credits)	
	elected from the following courses:	
STAT4711	Capstone experience for actuarial science undergraduates (6)	
STAT4767	Actuarial science internship (6)	
STAT4798	Statistics and actuarial science project (6)	

1. Students are expected to be in full-time status for eight academic semesters (in additional to their 6-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.

Remarks:

Programme Title	BSc in Actuarial Science
Offered to students	2014
admitted to Year 1 in	

The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes:

By the end of this programme, students should be able to:

- PLO 1: understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 2: understand and identify the nature of insurance, finance and investment risks (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 3: develop analytical skills to evaluate and measure various kinds of risk, and appraise the related moral and ethical issues (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 4 : formulate effective business strategies to manage various kinds of risk (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 5: communicate and collaborate with people effectively on issues related to actuarial science (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 6 : discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses (by means of coursework and tutorial classes and/or research-based project in the curriculum)

Impermissible Combinations:

Required courses (138 credits)			
1. Year I Courses			
Disciplinary Core Co	ourses (42 credits)		
ACCT1101	Introduction to financial accounting (6)		
ECON1210	Introductory microeconomics (6)		
ECON1220	Introductory macroeconomics (6)		
MATH1821	Mathematical methods for actuarial science I (6)		
MATH2822	Mathematical methods for actuarial science II (6)		
STAT2901	Probability and statistics: foundations of actuarial science (6)		
STAT2902	Financial mathematics (6)		
2. Year II Courses			
Disciplinary Core Co	ourses (42 credits)		
COMP1117	Computer programming (6)		
STAT3901	Life contingencies I (6)	[previous title: Life contingencies (6)]	
STAT3902	Statistical models (6)		
STAT3903	Stochastic models (6)		
STAT3904	Corporate finance for actuarial science (6)		
STAT3905	Introduction to financial derivatives (6)		
STAT3906	Risk theory I (6)		
3. Year III Courses			
Disciplinary Core Co			
STAT3907	Linear models and forecasting (6)		
STAT3908	Credibility theory and loss distributions (6)		
STAT3909	Life contingencies II (6)	[previous title: Advanced life contingencies	
STAT3910	Financial economics I (6)	(6)]	
STAT3911	Financial economics II (6)		
4. Year IV Courses			
Disciplinary Elective	es (18 credits)		
	from List A and List B, with at least 12 credits from List A:		
List A			
STAT3951	Further topics in contingencies (6)	[previous title: Advanced contingencies (6)]	
STAT3954	Current topics in actuarial science (6)		
STAT3955	Survival analysis (6)		
STAT3956	Pension funds and pension mathematics (6)		
STAT4607	Credit risk analysis (6)		
STAT4608	Market risk analysis (6)		
STAT4901	Risk theory II (6)		
STAT4903	Actuarial techniques for general insurance (6)		

STAT4904	Statistical learning for risk modelling (6)	
List B		
STAT3602	Statistical inference (6)	
STAT3612	Statistical machine learning (6)	[previous title: Data mining (6)]
STAT3616	Advanced SAS programming (6)	
STAT3953	Fundamentals of actuarial practice (6)	
STAT4602	Multivariate data analysis (6)	
STAT4902	Selected topics in actuarial science (6)	
5. Capstone Require	ment (6 credits)	
At least 6 credits se	elected from the following courses:	
STAT4711	Capstone experience for actuarial science undergraduates (6)	
STAT4767	Actuarial science internship (6)	
STAT4798	Statistics and actuarial science project (6)	

1. Students are expected to be in full-time status for eight academic semesters (in additional to their 6-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.

Remarks:

Programme Title	BSc in Actuarial Science	
Offered to students	2013	
admitted to Year 1 in		

The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes:

By the end of this programme, students should be able to:

- PLO 1: understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 2 : understand and identify the nature of insurance, finance and investment risks (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 3: develop analytical skills to evaluate and measure various kinds of risk, and appraise the related moral and ethical issues (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 4 : formulate effective business strategies to manage various kinds of risk (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 5: communicate and collaborate with people effectively on issues related to actuarial science (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 6 : discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses (by means of coursework and tutorial classes and/or research-based project in the curriculum)

Impermissible Combinations:

Required courses (138 credits)	
1. Year I Courses		
Disciplinary Core Co	ourses (42 credits)	
ACCT1101	Introduction to financial accounting (6)	
ECON1210	Introductory microeconomics (6)	
ECON1220	Introductory macroeconomics (6)	
MATH1821	Mathematical methods for actuarial science I (6)	
MATH2822	Mathematical methods for actuarial science II (6)	
STAT2901	Probability and statistics: foundations of actuarial science (6)	
STAT2902	Financial mathematics (6)	
2. Year II Courses		
Disciplinary Core Co	ourses (42 credits)	
COMP1117	Computer programming (6)	
STAT3901	Life contingencies I (6)	[previous title: Life contingencies (6)]
STAT3902	Statistical models (6)	
STAT3903	Stochastic models (6)	
STAT3904	Corporate finance for actuarial science (6)	
STAT3905	Introduction to financial derivatives (6)	
STAT3906	Risk theory I (6)	
3. Year III Courses		
Disciplinary Core Co		
STAT3907	Linear models and forecasting (6)	
STAT3908	Credibility theory and loss distributions (6)	
STAT3909	Life contingencies II (6)	[previous title: Advanced life contingencies
07470040	Financial companies 1 (C)	(6)]
STAT3910	Financial economics I (6)	
STAT3911 4. Year IV Courses	Financial economics II (6)	
	a (40 avadita)	
Disciplinary Elective	from List A and List B, with at least 12 credits from List A:	
List A	nom List A and List B, with at least 12 credits nom List A.	
STAT3951	Further topics in contingencies (6)	[previous title: Advanced contingencies (6)]
STAT3954	Current topics in actuarial science (6)	
STAT3955	Survival analysis (6)	
STAT3956	Pension funds and pension mathematics (6)	
STAT3550 STAT4607	Credit risk analysis (6)	
STAT4608	Market risk analysis (6)	
STAT4000	Risk theory II (6)	
STAT4903	Actuarial techniques for general insurance (6)	

STAT4904	Statistical learning for risk modelling (6)	
List B		
STAT3602	Statistical inference (6)	
STAT3612	Statistical machine learning (6)	[previous title: Data mining (6)]
STAT3616	Advanced SAS programming (6)	
STAT3953	Fundamentals of actuarial practice (6)	
STAT4602	Multivariate data analysis (6)	
STAT4902	Selected topics in actuarial science (6)	
5. Capstone Require	ement (6 credits)	
At least 6 credits s	elected from the following courses:	
STAT4711	Capstone experience for actuarial science undergraduates (6)	
STAT4767	Actuarial science internship (6)	
STAT4798	Statistics and actuarial science project (6)	

1. Students are expected to be in full-time status for eight academic semesters (in additional to their 6-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.

3. The course title of ECON1210 Introductory microeconomics in 2013-14 or before is Introduction to economics I.

4. The course title of ECON1220 Introductory macroeconomics in 2013-14 or before is Introduction to economics II.

Remarks:

Programme Title	BSc in Actuarial Science
Offered to students	2012
admitted to Year 1 in	

The Actuarial Science curriculum aims at providing 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 such as probability, statistics, economics, investment, finance, law, taxation, and accounting. The Actuarial Science curriculum reflects this by incorporating various interdisciplinary courses into the basic actuarial training. The programme is set up to equip students with solid background in actuarial science, to develop their confidence and analytical skills to define and tackle problems in actuarial science and other related fields. Specifically, the programme is designed to provide adequate knowledge for students to sit for the early professional examinations organized by international actuarial organizations so that they can successfully join the actuarial profession after graduation. In addition, the programme provides enough academic training for students who wish to pursue postgraduate studies in actuarial science or other related areas.

Learning Outcomes:

By the end of this programme, students should be able to:

- PLO 1: understand and apply various analytic and quantitative methods to define and solve problems in insurance, finance, economics, investment, pension, financial risk management and demography (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 2 : understand and identify the nature of insurance, finance and investment risks (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 3: develop analytical skills to evaluate and measure various kinds of risk, and appraise the related moral and ethical issues (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 4 : formulate effective business strategies to manage various kinds of risk (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 5: communicate and collaborate with people effectively on issues related to actuarial science (by means of coursework and tutorial classes and/or research-based project in the curriculum)
- PLO 6 : discuss current actuarial issues and acquire and apply practical knowledge in some specially designed courses (by means of coursework and tutorial classes and/or research-based project in the curriculum)

Impermissible Combinations:

Required courses (138 credits)	
1. Year I Courses		
Disciplinary Core Co	ourses (42 credits)	
ACCT1101	Introduction to financial accounting (6)	
ECON1210	Introductory microeconomics (6)	
ECON1220	Introductory macroeconomics (6)	
MATH1821	Mathematical methods for actuarial science I (6)	
MATH2822	Mathematical methods for actuarial science II (6)	
STAT2901	Probability and statistics: foundations of actuarial science (6)	
STAT2902	Financial mathematics (6)	
2. Year II Courses		
Disciplinary Core Co		
COMP1117	Computer programming (6)	
STAT3901	Life contingencies I (6)	[previous title: Life contingencies (6)]
STAT3902	Statistical models (6)	
STAT3903	Stochastic models (6)	
STAT3904	Corporate finance for actuarial science (6)	
STAT3905	Introduction to financial derivatives (6)	
STAT3906	Risk theory I (6)	
3. Year III Courses		
Disciplinary Core Co		
STAT3907	Linear models and forecasting (6)	
STAT3908	Credibility theory and loss distributions (6)	
STAT3909	Life contingencies II (6)	[previous title: Advanced life contingencies
STAT3910	Financial economics I (6)	(6)]
STAT3911	Financial economics II (6)	
4. Year IV Courses		
Disciplinary Elective	s (18 credits)	
	from List A and List B, with at least 12 credits from List A:	
List A		
STAT3951	Further topics in contingencies (6)	[previous title: Advanced contingencies (6)]
STAT3954	Current topics in actuarial science (6)	
STAT3955	Survival analysis (6)	
STAT3956	Pension funds and pension mathematics (6)	
STAT4607	Credit risk analysis (6)	
STAT4608	Market risk analysis (6)	
STAT4901	Risk theory II (6)	
STAT4903	Actuarial techniques for general insurance (6)	

STAT4904	Statistical learning for risk modelling (6)	
List B		
STAT3602	Statistical inference (6)	
STAT3612	Statistical machine learning (6)	[previous title: Data mining (6)]
STAT3616	Advanced SAS programming (6)	
STAT3952	Investment and asset management (6)	
STAT3953	Fundamentals of actuarial practice (6)	
STAT4602	Multivariate data analysis (6)	
STAT4902	Selected topics in actuarial science (6)	
5. Capstone Require	ment (6 credits)	
At least 6 credits se	lected from the following courses:	
STAT4711	Capstone experience for actuarial science undergraduates (6)	
STAT4767	Actuarial science internship (6)	
STAT4798	Statistics and actuarial science project (6)	

1. Students are expected to be in full-time status for eight academic semesters (in additional to their 6-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.

3. The course title of ECON1210 Introductory microeconomics in 2013-14 or before is Introduction to economics I.

4. The course title of ECON1220 Introductory macroeconomics in 2013-14 or before is Introduction to economics II.

Remarks:

CAES1000	Core Ur	niversity Englis	h (6 credits)	Academic Yea	ar 2021	
Offering Department	English			Quota		
Course Co-ordinator	Dr P Wor	ום (1st sem); Dr A א	Yau (2nd sem), English <i>(pmtw2</i> @hku.h	k; aliceyhy@hku.hk)		
Feachers Involved	•	u,Centre for Applied ong,Centre for Appli	d English Studies) ed English Studies)			
Course Objectives						
Course Contents & Topics	proficience Common written ac for and u the Mood skills and	cy in the university of Core Curriculum. cademic texts, expr use academic source dle platform on aca d avoiding plagiaris to participate more	sh (CUE) course aims to enhance fi context. CUE focuses on developing st These include the language skills ne ress academic ideas and concepts cle ces of information in their writing and s ademic speaking, academic grammar, sm will be offered to students to supp a effectively in their first-year university	udents' academic English lar eeded to understand and pr arly and in a well-structured speaking. Four online-learnin academic vocabulary, citati ort their English learning. Th	nguage skills for the oduce spoken an manner and searc g modules throug on and referencin nis course will hel	
Course Learning			this course, students should be able to	D:		
Outcomes	 CLO 1 identify and distinguish between main ideas and supporting details in lectures and writter demonstrate an understanding of the arguments / facts expressed CLO 2 form and express personal opinions through critical reading and listening CLO 3 argue for and defend a position in a clear and structured way using academic sources, through speaking CLO 4 demonstrate control of grammatical accuracy and lexical appropriacy in academic communication 					
Pre-requisites	NIL		- grannation doordoy and lonion a			
(and Co-requisites and Impermissible combinations)			0// . 0000 0000 ./			
Offer in 2021 - 2022	1		Offer in 2022 - 2023 : Y ding result. Students are able to produce sp	Examination	No Exam	
Grade Descriptors (A+ to F)	A B	appropriately structu position. Students al reference correctly a texts. Written langua comprehensible and Good to very good n	red. Students can clearly and concisely expla lways use appropriate academic sources to su at all times. Students demonstrate an ability to f age contains very few, if any, systematic errors fluent. esult. Students are able to produce spoken and	in academic concepts and critical upport their ideas in writing and sp iully comprehend and critically inter is in grammar and vocabulary. Spol- d written academic texts which are	y argue for a detailed beaking. They cite and bret spoken and writte ten language is alway appropriately structure	
		with only minor errors. Students can almost always clearly and concisely explain academic concepts and almost always critically argue for a detailed position. Students almost always use appropriate academic sources to support their ideas in writing and speaking. They cite and reference correctly with only a few non-systematic errors. Students can comprehend and interpret texts with ease, although they may miss some implied meanings and opinions. Written language is mostly accurate but contains a few systematic errors in complex grammar and vocabulary. Spoken language is mostly comprehensible and fluent.				
	C Satisfactory to reasonably good result. Spoken and written academic texts produced by students are sometimes not-well structured but there is some evidence of this ability. Students are sometimes unable to clearly and concisely explain academic concepts. While they can argue for a position, it is not very detailed and tend to be simplistic rather than critical. Students sometimes use sources which are nonacademic and/or not appropriate to support their ideas in writing and speaking. There are some systematic errors in citation and referencing but also evidence of correct systematic use. Students have some difficulty comprehending and critically interpreting texts. They can always understand the main ideas but may miss some of the writer's views and attitudes. Written language is sometimes evidence of corrol of simple grammatical structures. Spoken language is generally comprehensible and fluent but at times places strain on the listener.					
	D	may be some eviden for a position. There Students often use s are many systematic of citation and refere the main ideas and v complex grammar a placed on the listener		clearly and concisely explain acader ademic concepts but not to critical popriate to support their ideas in writi is evidence of an understanding of ding and interpreting texts, sometim often inaccurate containing errors in times comprehensible and fluent,	nic concepts and argu y argue for a position ng and speaking. The some of the convention es failing to understar n a range of simple ar	
		I Incetiefecter (recult				
	Fail	are unstructured and	. Productive skills are too limited to be able to su d unclear. Students are unable to follow and i nguage is often incomprehensible. Assessments	nterpret texts. There are language	ten assessments. Tex errors in almost ever	
ntensive Course	Y	are unstructured and sentence. Spoken lar	d unclear. Students are unable to follow and i	nterpret texts. There are language	ten assessments. Tex errors in almost ever	
ntensive Course Course Type	Y Lecture-b	are unstructured and sentence. Spoken lar based course	d unclear. Students are unable to follow and i nguage is often incomprehensible. Assessments	nterpret texts. There are language	ten assessments. Tex errors in almost ever ntain plagiarism.	
ntensive Course Course Type Course Teaching	Y Lecture-b Activitie	are unstructured and sentence. Spoken lar pased course	d unclear. Students are unable to follow and i	nterpret texts. There are language	ten assessments. Tex errors in almost ever ntain plagiarism. No. of Hours	
ntensive Course Course Type Course Teaching	Y Lecture-b Activitie Lectures	are unstructured and sentence. Spoken lar pased course	d unclear. Students are unable to follow and i nguage is often incomprehensible. Assessments	nterpret texts. There are language	ten assessments. Tex errors in almost ever ntain plagiarism. No. of Hours 30	
ntensive Course Course Type Course Teaching	Y Lecture-b Activitie Lectures Tutorials	are unstructured and sentence. Spoken lar pased course	d unclear. Students are unable to follow and i nguage is often incomprehensible. Assessments	nterpret texts. There are language	ten assessments. Tex errors in almost ever ntain plagiarism. No. of Hours 30 6	
ntensive Course Course Type Course Teaching & Learning Activities	Y Lecture-b Activitie Lectures Tutorials Reading	are unstructured and sentence. Spoken lar based course s s / Self study	d unclear. Students are unable to follow and i nguage is often incomprehensible. Assessments Details	nterpret texts. There are language may not have been attempted or co	ten assessments. Tex errors in almost even ntain plagiarism. No. of Hours 30 6 84	
Communication- intensive Course Course Type Course Teaching & Learning Activities Assessment Methods and Weighting	Y Lecture-b Activitie Lectures Tutorials	are unstructured and sentence. Spoken lar based course s s / Self study	d unclear. Students are unable to follow and i nguage is often incomprehensible. Assessments	nterpret texts. There are language	ten assessments. Tex errors in almost ever ntain plagiarism. No. of Hours 30 6	
ntensive Course Course Type Course Teaching & Learning Activities Assessment Methods	Y Lecture-b Activitie Lectures Tutorials Reading	are unstructured and sentence. Spoken lar pased course s / Self study	d unclear. Students are unable to follow and i nguage is often incomprehensible. Assessments Details	nterpret texts. There are language may not have been attempted or co Weighting in final	ten assessments. Tex errors in almost even ntain plagiarism. No. of Hours 30 6 84 Assessment Methods	
ntensive Course Course Type Course Teaching & Learning Activities Assessment Methods	Y Lecture-b Activitie Lectures Tutorials Reading Methods	are unstructured and sentence. Spoken lar pased course s / Self study	d unclear. Students are unable to follow and i nguage is often incomprehensible. Assessments Details Details	nterpret texts. There are language may not have been attempted or co Weighting in final course grade (%)	ten assessments. Tex errors in almost even ntain plagiarism. No. of Hours 30 6 84 Assessment Methods	

CAES9820	Academ	nic English for so	cience students (6 credits)	Academic Ye	ear 2021
Offering Department	English		· · · · ·	Quota	
Course Co-ordinator		oynton, English <i>(sbo</i>	ynton@hku.hk)		
Teachers Involved	(Mr S D B	Sovnton.Centre for A	pplied English Studies)		
Course Objectives	This 6-credit English-in-the-Discipline course aims to develop students' professional and technical communication skills for disciplinary studies in the sciences. There are three main components in the course: 1) Writing a popular science article 2) An oral presentation and 3) Independent language learning. Students will learn rhetorical skills for presenting and explaining scientific concepts to a cross-disciplinary and non-specialist audience in both written and spoken communication. Students will also be given an opportunity to design a personalised language learning plan, carry out the plan and reflect on their own independent language learning experience.				
Course Contents & Topics	Topics co - Finding, - Compilir - Contrast - Writing f - Organiz grammar; - Critically	vered in the course evaluating and usin og an academic bibli ting academic and p for a specific audienc ring and articulating and y examine their ow	will be: g appropriate academic source materia ography; opular genres of Science; ce, including stance, shared knowledge g ideas in an academically suitable f n language proficiency and analyze	ls; , levels of formality; and ormat including appropri how that relates to the	
	successfu	ally within their discip	line. Developing self-directed learning	strategies.	
Course Learning			his course, students should be able to:		
Outcomes	CLO 1 id	entify and summariz	e disciplinary sources related to a spec	ified topic	
	kr	nowledge	and spoken) appropriate for a cross-di		l on their disciplinary
		entity their own lang	uage learning needs and implement a p	bian to meet those needs	
Pre-requisites (and Co-requisites and Impermissible combinations)	NIL				
Offer in 2021 - 2022	Y 1st	sem 2nd sem O	offer in 2022 - 2023 : Y	Examination	No Exam
Grade Descriptors (A+ to F)	A B C	using original languag organizational charact and reflection. Good to very good res Text mostly uses so organizational charact although there is some Satisfactory to reason	stently demonstrates ability to summarize salien e. Text uses sources appropriately and demons eristics. Language learning needs are clearly ide sult. Usually demonstrates ability to summarize urces appropriately and demonstrates mostly eristics. Language learning needs are stated wit misalignment between goals and self-study com ably good result. Demonstrates some ability to	trates accurate and appropriate antified and aligned with eviden salient points accurately using v accurate and appropriate gi h some reference to evidence of pleted.	grammatical, lexical and ce of planning, self-study mostly original language rammatical, lexical and of planning and reflection mostly original language
	although some inaccuracies are present. Text uses some sources appropriately and demonstrates appropriate but simple grammatical and lexical characteristics with some organizational flaws. Language learning needs are stated with some limited evidence of planning and reflection but goals and self-study are misaligned. D Barely satisfactory result. Demonstrates a limited ability to summarize salient points from sources with inaccuracies and little original language. Text uses sources inappropriately and demonstrates grammatical inaccuracy, inappropriate lexical choices and organizational flaws. There is a minimal statement of language learning needs, planning and reflection with little or no apparent alignment between goals and self-study.				
	Fail Unsatisfactory result. Does not demonstrate ability to summarize salient points identify, interpret or appropriately paraphrase reliable sources. Text uses no sources and demonstrates serious grammatical, lexical and/or organizational errors. Does not demonstrate any meaningful attempt to identify language learning needs or implement a plan.				
	Y	, ,			
ntensive Course		· · ·			
ntensive Course Course Type		ased course			1
ntensive Course Course Type Course Teaching	Activities		Details		No. of Hours
ntensive Course Course Type Course Teaching	Activities Tutorials	S	Details seminars		36
ntensive Course Course Type Course Teaching	Activities Tutorials				
ntensive Course Course Type Course Teaching	Activities Tutorials	s / Self study			36
ntensive Course Course Type Course Teaching & Learning Activities Assessment Methods	Activities Tutorials Reading	s / Self study ent	seminars	Weighting in final course grade (%)	36 120 84 Assessment Methods
ntensive Course Course Type Course Teaching & Learning Activities Assessment Methods	Activities Tutorials Reading Assessm	s / Self study ent	seminars independent learning work		36 120 84 Assessment
ntensive Course Course Type Course Teaching & Learning Activities Assessment Methods	Activities Tutorials Reading Assessm Methods	s / Self study ent	seminars independent learning work Details	course grade (%)	36 120 84 Assessment Methods
ntensive Course Course Type Course Teaching & Learning Activities Assessment Methods	Activities Tutorials Reading Assessm Methods Assignme	s / Self study ent	independent learning work Details independent learning work	course grade (%)	36 120 84 Assessment Methods
Communication- intensive Course Course Type Course Teaching & Learning Activities Assessment Methods and Weighting Required/recommended reading and online materials	Activities Tutorials Reading , Assessm Methods Assignme Essay Test	s / Self study ent	independent learning work Details independent learning work	20 55 25	36 120 84 Assessment Methods
ntensive Course Course Type Course Teaching & Learning Activities Assessment Methods and Weighting Required/recommended reading and	Activities Tutorials Reading Assessm Methods Assignme Essay Test Course m	s / Self study ent ; ents aterials to be provid	seminars independent learning work Details independent learning work other genres of writing	20 55 25	36 120 84 Assessment Methods
ntensive Course Course Type Course Teaching & Learning Activities Assessment Methods and Weighting Required/recommended reading and online materials	Activities Tutorials Reading / Assessm Methods Assignme Essay Test Course m http://caes	s / Self study ent ; ents aterials to be provid s.hku.hk/caes9820/	seminars independent learning work Details independent learning work other genres of writing	course grade (%) 20 55 25 e.	36 120 84 Assessment Methods to CLO Mapping

		ional and technical s (6 credits)	l communication for mathematic		r 2021	
Offering Department	English			Quota		
Course Co-ordinator		oynton, English <i>(sboyn</i> i	,			
eachers Involved		Boynton, Centre for Appl				
Course Objectives	skills for study rep explaining in both w	disciplinary studies in i port writing, 2). profess g mathematical and sta	ipline course aims to develop students' mathematical sciences. There are two sional oral presentation. Students will tistical data and trends, and justifying an nunication. This will be achieved throug -based approach.	main components in the learn rhetorical skills f nalyses and recommend	e course: 1). Cas or presenting an ations convincing	
Course Contents	There are	e two main components	in the course:			
t Topics	2. Profess Students justifying	analyses and recomm	lls for presenting and explaining mather rendations convincingly in both written ples of case study reports and presenta	and spoken communic	ation. This will b	
ourse Learning	On succe	ssful completion of this	course, students should be able to:			
Dutcomes	 CLO 1 present and explain mathematical and statistical data and trends using appropriate rhetorical skills CLO 2 organize and articulate coherent ideas with appropriate language devices in a case study report and a oral presentation CLO 3 justify analyses and recommendations convincingly in a case study report and an oral presentation CLO 4 identify their own language learning needs, develop independent learning strategies to address thos needs, and reflect on their own independent language learning experience 					
Pre-requisites	NIL	.,				
and Co-requisites and Impermissible combinations)						
Offer in 2021 - 2022	Y 1st	sem 2nd sem Offe	r in 2022 - 2023 : Y	Examination	No Exam	
Grade Descriptors	A		ctive skills displaying a complete awareness of a			
(A+ to F)	B C	data limitations when rele- specific and relevant futu contains a sophisticated ra Mostly appropriate produ occasional lapses in area: data limitations when rele future language learning grammar and vocabulary, Productive skills are gene successfully. Purposes are and make recommendatio	o critically analyse a case scenario, convincingly vant. Students are able to successfully evaluate re language learning plans. Spoken language i ange of grammar and vocabulary, with very few synctive skills displaying good awareness of auc s. Students are able to analyse a case scenario vant. Students are able to evaluate their langua plans. Spoken language is comprehensible and making some systematic errors of language whic raily appropriate for the intended audience. There e generally clear and tone is generally suitable. Sons, but the analysis and recommendations need a limited number of areas and proposed future	their language performance in s fully comprehensible and fli ystematic errors. tience, purpose and structur, justify analyses and recomm ge performance in most areas f fluent. Written language cor h generally do not impede und e is an overall sense that the tudents are generally able to a more justification. Students ar	all areas and propos uent. Written languag e, although there ar endations, and discus s and propose releva tains a good range erstanding. work is communicatir nalyse a case scenar e able to evaluate the	
	 Ianguage is generally comprehensible and fluent. Written language contains inaccuracies when complex grammar and vocabulary are used. Productive skills display weaknesses in awareness of purpose and audience. Tone is at times unsuitable. Students superficially analyse a case scenario, and the analyses and recommendations are vague. The structure is generally appropriate although links between sections may be lacking. Students are able to evaluate their language performance only in few areas and the proposed future language learning plans may not be relevant. Written language contains frequent errors in complex grammar and vocabulary, but the written work can still be followed by a patient and sympathetic audience. Spoken language is comprehensible and quite fluent, but stain is at times placed on the listener. 					
		comprehensible and quite				
	Fail	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s		d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr	Spoken language in rry out tasks. Studen ague and unstructure ins. There are freque rehension of ideas ar	
ntensive Course	Y	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism.	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limiter ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wf	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr	Spoken language i rry out tasks. Studen ague and unstructure ins. There are freque ehension of ideas ar	
ntensive Course course Type	Y Lecture-b	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism.	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limited ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wi places considerable strain on the listener throug	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr	Spoken language i rry out tasks. Studen ague and unstructure ins. There are freque ehension of ideas ar ave been attempted	
ntensive Course course Type course Teaching	Y Lecture-b	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism.	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limited ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wi places considerable strain on the listener throug Details	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr	Spoken language i rry out tasks. Studen ague and unstructure ins. There are freque ehension of ideas ar ave been attempted No. of Hours	
ntensive Course ourse Type ourse Teaching	Y Lecture-b Activities Lectures	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism.	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limited ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wi places considerable strain on the listener throug Details seminars	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr	Spoken language i rry out tasks. Studen ague and unstructure ins. There are freque ehension of ideas ar ave been attempted No. of Hours 30	
ntensive Course ourse Type ourse Teaching	Y Lecture-b Activitie Lectures Tutorials	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism.	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limited ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wi places considerable strain on the listener throug Details	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr	Spoken language rry out tasks. Studen ague and unstructure ins. There are freque ehension of ideas ar ave been attempted No. of Hours 30 6	
ntensive Course course Type course Teaching	Y Lecture-b Activitie Lectures Tutorials Reading	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism. hased course s	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limited ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wt places considerable strain on the listener throug Details seminars small group tutorials	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr	Spoken language rry out tasks. Studen ague and unstructure ins. There are freque ehension of ideas ar ave been attempted No. of Hours 30 6 120	
ntensive Course course Type course Teaching Learning Activities	Y Lecture-b Activitie Lectures Tutorials	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism. hased course s	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limited ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wh places considerable strain on the listener throug Details seminars small group tutorials independent learning work	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr	Spoken language rry out tasks. Studen ague and unstructure ins. There are freque ehension of ideas ar ave been attempted No. of Hours 30 6	
ntensive Course course Type course Teaching Learning Activities	Y Lecture-b Activitie Lectures Tutorials Reading	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism. hased course s / Self study tent	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limited ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wt places considerable strain on the listener throug Details seminars small group tutorials	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr	No. of Hours 30 6 120 120 120 120 120 120 120 120	
ntensive Course Course Type Course Teaching Learning Activities	Y Lecture-b Activitie Lectures Tutorials Reading Assessm	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism. assed course s / Self study tent	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limited ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wh places considerable strain on the listener throug Details seminars small group tutorials independent learning work	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr hout. Assessments may not h	Spoken language rry out tasks. Studen ague and unstructure ens. There are freque ehension of ideas ar ave been attempted No. of Hours 30 6 120 84 Assessment Methods	
ntensive Course Course Type Course Teaching Learning Activities	Y Lecture-b Activitie Lectures Tutorials Reading Assessm Methods	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism. assed course s / Self study ment b ents	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limited ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wh places considerable strain on the listener throug Details seminars small group tutorials independent learning work	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr hout. Assessments may not h Weighting in final course grade (%)	Spoken language rry out tasks. Studen ague and unstructure ins. There are freque ehension of ideas ar ave been attempted No. of Hours 30 6 120 84 Assessment Methods	
Communication- ntensive Course Course Type Course Teaching A Learning Activities	Y Lecture-b Activitie Lectures Tutorials Reading Assessm Methods Assignm	Productive skills show littl are unable to analyse a c Students are not able to e language errors in both s points. Spoken language contain plagiarism. assed course S / Self study ment ents tion	fluent, but stain is at times placed on the listener. e or no awareness of audience or are too limited ase scenario and make reasonable recommenda evaluate their language performance and propos imple and complex grammar in written work, wh places considerable strain on the listener throug Details seminars small group tutorials independent learning work	d to be able to successfully ca ations. Ideas are incoherent, v e future language learning pla nich impede successful compr hout. Assessments may not h Weighting in final course grade (%) 40	Spoken language rry out tasks. Studer ague and unstructure ins. There are freque ehension of ideas ar ave been attempted No. of Hours 30 6 120 84 Assessment Methods	

CSCI9001	Practical Chinese for sc		cience students (6 credits)	Academic Yea	ar 2021		
Offering Department	Chinese			Quota			
Course Co-ordinator		ong, Chinese <i>(kwv</i>	vongb@hku.hk)				
Feachers Involved	(Dr K T La (Dr S F Le	han,Chinese) m,Chinese) ee,Chinese) Vong,Chinese)					
Course Objectives	This cours students t announcer	e aims to enhance to master the tec ments, notice, broo s, the style and r	e the students' competence using Chines hniques of writing different types of o chures, leaflets, and reports. In addition, thetoric of reader-based writings are i	locuments such as mem topics addressing resenta	os, emails, letters ation and discussion		
Course Contents & Topics	good-news	s and goodwill me documents: ema	nodern Chinese - The Chinese writing s essages, bad-news messages, and pe ils; presentations - Styles and rhetor	ersuasive messages - Teo	chniques of writin		
Course Learning	On succes	On successful completion of this course, students should be able to:					
Outcomes			competency in modern Chinese and write				
			vices and stylistics, as well as practical v				
	CLO 4 ap	ply their disciplinar	f communication, initiate discussions an y knowledge and their Chinese writing s and creatively in different social or profe	kills and professional pres			
Pre-requisites and Co-requisites and Impermissible combinations)	NIL						
Offer in 2021 - 2022	Y 1st s	sem 2nd sem (Offer in 2022 - 2023 : Y	Examination	Dec May		
Grade Descriptors (A+ to F)	 A The student acquired a superb ability to achieve the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate, and synthesize the language techniques for effective communication in all situations. B The student acquired the ability to achieve the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate, and synthesize the language techniques for effective communication in most situations. C The student acquired adequate ability to achieve the intended learning outcomes of the course at low levels of learning (i.e. evaluate and apply the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and apply the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communication) but not at high levels of learning (i.e. evaluate and poly the language techniques for effective communica						
	synthesize the language techniques for effective communication). D The student only has basic familiarity with the subject.						
	Fail						
Communication	N	The student has very	limited familiarity with the subject.				
.oomunication.	1.4						
ntensive Course	Lecture-ba	ased course					
ntensive Course Course Type Course Teaching	Lecture-ba		Details		No. of Hours		
ntensive Course Course Type Course Teaching			Details		No. of Hours 12		
ntensive Course Course Type Course Teaching	Activities Lectures Tutorials	5	Small group tutorials		12 12		
ntensive Course Course Type Course Teaching	Activities Lectures Tutorials Group wo	rk			12 12 24		
ntensive Course Course Type Course Teaching	Activities Lectures Tutorials Group wo Discussion	rk n	Small group tutorials Workshops		12 12 24 24		
Communication- ntensive Course Course Type Course Teaching & Learning Activities	Activities Lectures Tutorials Group wo Discussion Reading /	rk n Self study	Small group tutorials	preparation (12 hours)	12 12 24 24 32		
ntensive Course Course Type Course Teaching & Learning Activities	Activities Lectures Tutorials Group wo Discussion Reading / Assessme	rk n Self study	Small group tutorials Workshops Reading/self study (20 hours) and	,	12 12 24 24 32 16		
ntensive Course Course Type Course Teaching	Activities Lectures Tutorials Group wo Discussion Reading /	rk n Self study	Small group tutorials Workshops	preparation (12 hours) Weighting in final course grade (%)	12 12 24 24 32 16 Assessment Methods		
ntensive Course Course Type Course Teaching & Learning Activities	Activities Lectures Tutorials Group wo Discussion Reading / Assessme	s n Self study ent	Small group tutorials Workshops Reading/self study (20 hours) and	Weighting in final course grade (%) 50	12 12 24 24 32 16 Assessment Methods		
ntensive Course Course Type Course Teaching & Learning Activities	Activities Lectures Tutorials Group wo Discussion Reading / Assessme Methods Assignme Examinati	rk n Self study ent ents ion	Small group tutorials Workshops Reading/self study (20 hours) and Details	Weighting in final course grade (%) 50 50	12 12 24 24 32 16 Assessment Methods to CLO Mappin		

MATH1821	Mathem	atical methods	for actuarial science I (6 credits	Academic Ye	ar 2021		
Offering Department	Mathemat			Quota			
Course Co-ordinator	Dr C W W	ong, Mathematics	(cwwongab@hku.hk)				
Feachers Involved		Vong,Mathematics					
Course Objectives	backgrour single vari Core Math	nd of calculus of o iable calculus and nematics plus Moo	e two mathematics courses designed to one and several variables and an introdu l elementary matrix theory. It aims at stu lule 2 background.	iction to linear algebra. Th	e course focuses o		
Course Contents & Topics	 Limits, co Mean va Bisection Higher o Taylor ap Improper Numerica Basic material 	n method and New rder derivatives, n pproximation and r integrals, partial al integration, Traj	rentiability. icit differentiation; L'Hopital's rule. vton's method. naxima and minima, graph sketching. error estimation. fractions, integration by parts. pezoidal rule and Simpson's rule. f orders 2 and 3) operations, determinan	ts.			
Course Learning Outcomes	On succes CLO 1 de CLO 2 ev CLO 3 ap sk CLO 4 ap CLO 5 pe	On successful completion of this course, students should be able to: CLO 1 describe properties of a function and an inverse function CLO 2 evaluate various kinds of limits, and determine continuity and differentiability of functions CLO 3 apply advanced rules/techniques of differentiation and integration to compute derivatives and integrals; sketch graphs of functions CLO 4 approximate integrals by numerical methods CLO 5 perform matrix and vector operations, compute determinants CLO 6 solve simple first and second order ordinary differential equations					
Pre-requisites and Co-requisites and Impermissible combinations)	2, or equiv Not for stu courses. For BSc(A	valent; and udents who have ActuarSc) students	•	MATH1853), or have alrea	ady enrolled in thes		
Offer in 2021 - 2022	Y 1st	sem Offer in 202	22 - 2023 : Y	Examination	Dec		
Grade Descriptors (A+ to F)	 A Demonstrate an excellent understanding of key concepts and ideas by being able to identify the appropriate theorems an applications through correctly analysing problems, clearly and elegantly presenting correct logical reasoning and argume and being able to carry out computations carefully and correctly, and with some innovative approaches to solving problem B Demonstrate a good understanding of key concepts and ideas by being able to identify the appropriate theorems ar applications through correctly analysing problems, but with some minor inadequacies in arguments, identifying the appropriate theorems are applications through correctly analysing problems, but with some minor computational errors. C Demonstrate an acceptable understanding of key concepts and ideas by being able to correctly identify appropriate theorems through theorems through incorrectly analysing problems with poor argument presentation or a number of minor computational errors. D Demonstrate some understanding of key concepts and ideas by being able to correctly identify appropriate theorems, the substantial inadequacies in applying the theorems through incorrectly analysing problems with poor argument presentation or a number of minor computational errors. D Demonstrate some understanding of key concepts and ideas by being able to correctly identify appropriate theorems, the substantial inadequacies in applying the theorems through incorrectly analysing problems with poor argument or present with substantial computational errors. Fail Demonstrate poor and inadequate understanding by not being able to identify appropriate theorems or their applications. 						
Communication- ntensive Course	N	being able to comple					
Course Type	Lecture-ba	ased course					
Course Teaching	Activities		Details		No. of Hours		
	Lectures				36		
% Learning Activities					12		
& Learning Activities	Tutorials	Reading / Self study					
& Learning Activities		Self study			100		
Assessment Methods	Reading / Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mappin		
Assessment Methods	Reading / Methods Assignme	ents	Details	course grade (%)	Assessment Methods to CLO Mappin CLO 1,2,3,4,5,6		
Assessment Methods	Reading / Methods Assignme Examinat	ents	Details	course grade (%) 10 50	Assessment Methods to CLO Mappin CLO 1,2,3,4,5,6 CLO 1,2,3,4,5,6		
& Learning Activities Assessment Methods and Weighting Required/recommended reading and online materials	Reading / Methods Assignme Examinat Test	ents ion	Details vised by Maurice D. Weir and Joel Ha	course grade (%) 10 50 40	Assessment Methods to CLO Mappin CLO 1,2,3,4,5,6 CLO 1,2,3,4,5,6 CLO 1,2,3,4,5,6		
Assessment Methods and Weighting Required/recommended	Reading / Methods Assignme Examinat Test George B edition)	ents ion		course grade (%) 10 50 40	Assessment Methods to CLO Mappin CLO 1,2,3,4,5,6 CLO 1,2,3,4,5,6 CLO 1,2,3,4,5,6		

MATH2822			or actuarial science II (6 credits		ear 2021		
Offering Department	Mathematics Quota						
Course Co-ordinator	Dr T W Ching, Mathematics (Imtching@maths.hku.hk)						
Teachers Involved	(Dr T W Ching,Mathematics) This course is the second of the two mathematics courses designed to provide actuarial science students with a						
Course Objectives	solid back on multiva	ground of calculus o	of one and several variables and an in linear algebra. It aims at students wit	troduction to linear algebra	. The course focuse		
Course Contents & Topics	- Gradients - Taylor ap - Maxima a - Double a - Matrices - Vector sp	 Functions of several variables; partial differentiation. Gradients and directional derivatives. Taylor approximation. Maxima and minima; Lagrange multipliers. Double and triple integrals, areas and volumes. Matrices, systems of linear equations, determinants. Vector spaces and subspaces. Eigenvalues and eigenvectors, diagonalization of matrices. 					
Course Learning Outcomes	On succes CLO 1 un de an	ssful completion of t derstand and reco terminants, system d dimension, and th	his course, students should be able to gnize various topics in linear algebr s of linear equations, eigenvalues an- ne rank-nullity theorem gnize various topics in functions of se	ra such as the basic arit d eigenvectors, diagonaliz	able matrices, basis		
Pre-requisites		uble/triple integrals	ocal extrema, vector-valued functions, and the change of variable formula	Jacobians, the method of I	_agrange multipliers		
(and Co-requisites and Impermissible combinations)	For BSc(A	ctuarSc) students c	only.				
Offer in 2021 - 2022	Y 2nd	sem Offer in 202	2 - 2023 : Y	Examination	May		
Grade Descriptors (A+ to F)	A	applications through c	lent understanding of key concepts and ideas b orrectly analysing problems, clearly and elegan / out computations carefully and correctly, and v	tly presenting correct logical reas	oning and argumentation		
	B C	Demonstrate a good understanding of key concepts and ideas by being able to identify the appropriate theorems and their applications through correctly analysing problems, but with some minor inadequacies in arguments, identifying the appropriate theorems or their applications and presentation or with some minor computational errors. Demonstrate an acceptable understanding of key concepts and ideas by being able to correctly identify appropriate theorems,					
		but with some inadequacies in applying the theorems through incorrectly analysing problems with poor argument and presentation or a number of minor computational errors. Demonstrate some understanding of key concepts and ideas by being able to correctly identify appropriate theorems, but with					
	D	Demonstrate some understanding or key concepts and loeas by being able to correctly identify appropriate theorems, but with substantial inadequacies in applying the theorems through incorrectly analysing problems with poor argument or presentation or with substantial computational errors. Demonstrate poor and inadequate understanding by not being able to identify appropriate theorems or their applications, or not					
	Fail	being able to complete		o identify appropriate theorems o	r their applications, or no		
Communication- intensive Course	N	song and to complete					
Course Type	Lecture-ba	ased course					
Course Teaching	Activities	;	Details		No. of Hours		
& Learning Activities	Lectures						
	Tutorials						
	Reading /	Self study			100		
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping		
	Assignments			10	CLO 1,2		
	Examinati	ion		50	CLO 1,2		
	Test		2 tests	40	CLO 1,2		
Required/recommended reading and	George B edition)	. Thomas; as revis	ed by Maurice D. Weir and Joel Ha	ass: Thomas' Calculus (Ad	ddison Wesley, 12tl		
online materials	Keith Matt	hews: Elementary L	inear Algebra (Url: www.numbertheor	y.org/book/)			
Course Website	http://moo	dle.hku.hk/					
Additional Course	Timetable	:					
Information	http://hkun	nath hku hk/~math/	Timetable/timetable2122 S2.pdf				

STAT2901	Probabil credits)	lity and statistics	: foundations of actuarial science	e (6 Academic Ye	ar 2021	
Offering Department	Statistics a	& Actuarial Science		Quota		
Course Co-ordinator	Prof S M S Lee, Statistics & Actuarial Science (<i>smslee@hku.hk</i>) (Prof S M S Lee, Statistics & Actuarial Science)					
Feachers Involved			,			
Course Objectives	The purpose of this course is to develop knowledge of the fundamental tools in probability and statistics for quantitatively assessing risk. Applications of these tools to actuarial science problems will be emphasized. Students will have a thorough command of probability topics and the supporting calculations.					
Course Contents & Topics	1. Genera - Basic ele - Mutually - Addition - Independ - Combina - Combina - Condition - Bayes th - Random 2. Univaria uniform, e distribution - Probabili - Cumulati - Mode, m - Variance - Central II	I probability executs of probability exclusive events and multiplication rul dence of events atorial probability nal probability and ex- eorem / Law of total variables ate probability distrib exponential, chi-squan n ity functions and prote ive distribution function edian, percentiles and e and measures of dis- imit theorem	in set notation les probability putions (including binomial, negative bind are, beta, Pareto, lognormal, gamma, v pability density functions ons id moments spersion	omial, geometric, hyper		
Course Learning Outcomes	On succes CLO 1 CLO 2	ssful completion of th understand the math	ntroduction of estimation is course, students should be able to: rematical theory underlying the modern p pabilistic analysis for problems involving r			
			probability and statistics to solve actuaria			
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in M	ATH1013 or already tudents who have p	ctuarSc) students] or already enrolled in enrolled in this course [for students outsi assed or enrolled in any of these cou	de the BSc(ActuarSc) p		
Offer in 2021 - 2022		I sem Offer in 2022	- 2023 : Y	Examination	May	
Grade Descriptors	Α		mastery at an advanced level of extensive know			
	B C D Fail	learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familian situations. Apply effective organizational and presentational skills. C Demonstrate general but incomplete command of knowledge and skills required for attaining most of the course learnin outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to more familiar situations. Apply moderately effective organizational and presentational skills. D Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some content of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills. Fail Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. La of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.				
Communication-	N	problems. Organization	and presentational skills are minimally effective or	inenecuve.		
intensive Course						
Course Type		ased course			No. of Hours	
Course Teaching & Learning Activities	Activities	6	Details	Details		
Learning Activities	Lectures Tutorials		tutorials/example classes		36 12	
		Self study			100	
Assessment Methods and Weighting	Methods	-	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping	
	Assignme	ents	Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3	
	Examinat	ion	One 3-hour written examination	75	CLO 1,2,3	
Required/recommended reading and online materials	Feller, W. Hassett, M Hogg, R.V	(1968). An Introducti /l. and Stewart, D. (20	on to Probability Theory and Its Applicati 006). Probability for Risk Management (2 009). Probability and Statistical Inferenc	ons. Wiley, New York. 2nd Edition). ACTEX Pul	olication: Winsted.	
Course Website	Wackerly, Thomson		rse in Probability (7th Edition). Prentice I and Scheaffer, R. (2008). Mathematica nia.			
		alo.rma.rm				
STAT2902	Financia	al mathematics (6	(crodite)	Academic Ye	ar 2021	
Offering Department		& Actuarial Science	Greates	Quota		
Course Co-ordinator			uarial Science (kcyuen@hku.hk)	QUUIA		
Feachers Involved		Yuen, Statistics & Act	· · · · · ·			
Course Objectives			ndamental concepts of financial mathem	4		

Course Objectives This course introduces the fundamental concepts of financial mathematics which plays an important role in the development of basic actuarial techniques. Practical applications of these concepts are also covered. **Course Contents** Key topics include: measurement of interest, annuities certain; discounted cash flow analysis; yield rates; amortization schedules and sinking funds; bonds and related securities; practical applications such as real estate mortgage and short sales; stochastic approaches to interest; and key terms of financial analysis such as yield

& Topics

Dutcomes CL 0 1 understand basic concepts of financial mathematics CL 0 2 understand and formulate elementary financial problems CL 0.3 apply compound interest theory to tackle some practical financial problems CL 0 3 apply compound interest theory to tackle some practical financial problems CL 0.4 show an understanding of the term structure of interest rates CL 0 4 show an understanding of time term structure of interest rates CL 0.5 show an understanding of simple stochastic models for investment returns Pre-requisites and Impermissible combinations) Pass in STAT2901, or already enrolled in this course; and May Pare 1. 2022 Y 2nd sem Offer in 2022 - 2023 : Y Examination May Strade Descriptors (A+ to F) Y 2nd sem Offer in 2022 - 2023 : Y Examination May B Demonstrate through mastery at an edvanced level of extensive knowledge and skills required for attaining at the course terming outcomes. Show evidence of some analytical and critical abilities and logical thinking, with evidened or distaining at the course terming outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply iffective organizational and presentational skills. C Demonstrate parinal but limited command of knowledge and skills requi		curves, s	pot rates, forward	rates, duration, convexity, and immuniz	ation.			
CLO 2 understand and formulate elementary financial problems CLO 3 apply computed interest theory to tackle some practical financial problems CLO 4 show an understanding of the terms structure of interest rates CLO 5 show an understanding of simple stochastic models for investment returns Pre-requisites and Co-requisites and Co-requisites Not for students who have passed in STAT3615, or already enrolled in this course; and Strade Descriptors (A+ to F) A Demonstrate horough mastery at an advanced level of extensive knowledge and skills required for attaining all the course learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original though, and ability to apply knowledge to avide range of complex, familiar and unfamiliar situations. Apply fighty effective organizational and presentational abilities. B Demonstrate substinial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and unfamiliar situations. Apply fingthy operative understand and presentational akills. C Outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and unfamiliar situations. Apply fingthy operative directive organizational and presentational akills. C Outcomes. Show evidence of some analytical and critical ab	Course Learning	On succe	essful completion	0:				
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CLO 5 show an understanding of simple stochastic models for investment returns Pre-requisites and Co-requisites and Co-requisites and Co-requisites and Impermissible Pass in STAT2901, or aiready enrolled in this course, and Not for students who have passed in STAT3615, or aiready enrolled in this course. Offer in 2021 - 2022 Y 2nd seem Offer in 2022 - 2023 : Y Examination May Stade Descriptors (A+ to F) A Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for attaining all the course learning outcomes. Show wide ange of knowledge and skills required for attaining all the course entaming outcomes. Show wide ange of knowledge and skills required for attaining all the course and some unfamiliar situations. Apply fieldiv organizational and presentational skills. B Demonstrate general but incomplete compand of knowledge and skills required for attaining at least most of the course learning outcomes. Show widence of analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply medicite agenizational and presentational skills. C Demonstrate general but innoted contenand of knowledge and skills required for attaining the course learning outcomes. Show evidence of command of knowledge and skills required for attaining the course learning outcomes. Show evidence of command of knowledge and skills required for attaining the course learning outcomes. Show evidence of command of knowledge and skills required for attaining the course learning outcomes. Show evidence of command of knowledge and skills required for attaining the course (and pand analytical and					•			
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And Weighting Increase Determs Course work Course grade (%) Methods to CLO Mapping Assignments Coursework (assignments, tutorials, class test(s) and participation) 50 CLO 1,2,3,4,5 Required/recommended reading and online materials Kellison, S. G.: The Theory of Interest (Irwin: Illinois, 2008, 3rd edition) 50 CLO 1,2,3,4,5		Reading	/ Self study			100		
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reading and Broverman, S. A.: Mathematics of Investment and Credit (ACTEX Publications - Mad River Books: Connecticut, 2004, 3rd edition)		Examina	ation	One 3-hour written examination	n 50	CLO 1,2,3,4,5		
		Kalliaan	S. G · The Theory	of Interest (Irwin: Illinois 2008 3rd edit	tion)			
	reading and	Broverma	an, S. A.: Mather			Books: Connecticut,		

STAT3602	Statisti	cal inference (6 credits)	Academic Year	2021			
Offering Department	Statistics	& Actuarial Science	Quota				
Course Co-ordinator	Prof S M	S Lee, Statistics & Actuarial Science (smslee@hku.hk)					
Teachers Involved	(Prof S M	I S Lee, Statistics & Actuarial Science)					
Course Objectives	mathema statistica	rse covers the advanced theory of point estimation, interval estim atically-oriented approach, the course provides a solid and rigory I methodologies and the underlying concepts and theory. It is suit their studies or to develop a career in statistical research.	ous treatment of infe	rential problems,			
Course Contents & Topics	unbiased 2. Decisio 3. Estim estimator 4. Hypot	sion problem - frequentist approach: loss function; risk; dec Iness; Bayes' rule. on problem - Bayesian approach: prior and posterior distributions, E ation theory: exponential families; likelihood; sufficiency; minim rs; information inequality; large-sample theory of maximum likelihood hesis testing: uniformly most powerful test; monotone likelihood ra i likelihood ratio; confidence set.	Bayesian inference. al sufficiency; comp d estimation.	leteness; UMVU			
Course Learning	On succe	essful completion of this course, students should be able to:					
Outcomes	CLO 1 form a panoramic view of classical developments in mathematical statistics						
	CLO 2 gain thorough insight into the essentials of statistical inference						
	CLO 3 build a solid foundation for future research studies in statistics and related areas						
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in S	STAT2602 or STAT3902					
Offer in 2021 - 2022	Y 1s	t sem Offer in 2022 - 2023 : Y	Examination	Dec			
Grade Descriptors (A+ to F)	Α	Demonstrate thorough mastery at an advanced level of extensive knowledge learning outcomes. Show strong analytical and critical abilities and logical think to apply knowledge to a wide range of complex, familiar and unfamiliar situa presentational skills.	ing, with evidence of origin	al thought, and ability			
	В	Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.					
	С	Demonstrate general but incomplete command of knowledge and skills required for attaining most of the course learning outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply moderately effective organizational and presentational skills.					
	D	Demonstrate partial but limited command of knowledge and skills required for a Show evidence of some coherent and logical thinking, but with limited analytical knowledge to solve problems. Apply limited or barely effective organizational and	and critical abilities. Show				
	Fail	Demonstrate little or no evidence of command of knowledge and skills required	for attaining the course lea	rning outcomes. Lack			

		cal abilities, logical and coherent thinking. Show and presentational skills are minimally effective of		ply knowledge to solve			
Communication- intensive Course	Ν						
Course Type	Lecture-based course						
Course Teaching	Activities	Details		No. of Hours			
& Learning Activities	Lectures			36			
	Tutorials			12			
	Reading / Self study			100			
Assessment Methods and Weighting	Methods	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping			
	Assignments Coursework (assignments, tutorials, and a class test)		40	CLO 1,2,3			
	Examination	One 2-hour written examination	60	CLO 1,2,3			
Required/recommended reading and online materials	Bickel, P. J. & Doksum, K. A Upper Saddle River, N.J., 200 Freund, J. E.: Mathematical S Hogg, R. V. & Craig, A. T.: Int	 Jerry, D. A. & Lindgren, B. W.: Statistics: Theory and Methods (Duxbury, Belmont, 1996) Jickel, P. J. & Doksum, K. A.: Mathematical Statistics: Basic Ideas and Selected Topics, Vol. 1 (Prentice Hall, Jpper Saddle River, N.J., 2001) Jreund, J. E.: Mathematical Statistics (Prentice Hall, Englewood Cliffs, N.J., 1992) Jogg, R. V. & Craig, A. T.: Introduction to Mathematical Statistics (Macmillan, New York, 1989) Pace, L. & Salvan, A.: Principles of Statistical Inference: from a neo-Fisherian perspective (World Scientific: 					
Course Website	http://moodle.hku.hk			nonago, 2000).			

STAT3612	Statistic	al machine learn	ing (6 credits)	Academic Y	'ear 2021		
Offering Department	Statistics a	& Actuarial Science		Quota			
Course Co-ordinator	Dr C Wan	g, Statistics & Actua	rial Science (stacw@hku.hk)				
Feachers Involved	(Dr C War	ng,Statistics & Actua	rial Science)				
Course Objectives	prediction: methodolo	s or decisions. Sta ogy in the algorithm	atistical machine learning e ic development. This course	nat build models of observed da mphasizes the importance of s provides a comprehensive and arning algorithms under supervis	tatistical theory and practical coverage of		
Course Contents & Topics	Basics of	settings. Basics of machine learning, generalized linear models, variable selection, regularization, cross-validation, tree based methods, dimension reduction, principal component analysis, cluster analysis.					
Course Learning	On succes	ssful completion of th	nis course, students should be	e able to:			
Dutcomes	CLO 1 ge	t familiar with the wo	orkflow of a data science or m	achine learning project			
	ch	aracteristics, streng	ths and weaknesses	al machine learning methods,	and recognize thei		
			priate techniques for a particu				
			<u> </u>	of prediction accuracy and model	explainability		
	CLO 5 ap	ply R programming	for solving data-scientific prot	blems			
Pre-requisites			603 and any University level 2				
and Co-requisites			07, or already enrolled in the				
and Impermissible			sed in STAT4904, or already	enrolled in this course; and			
combinations)		c(Actuarial Science)					
		,		904 Statistical learning for risk mo			
Offer in 2021 - 2022		sem Offer in 2022		Examinatio			
Grade Descriptors (A+ to F)	A Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for attaining all the course learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and ability to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effective organizational and presentational skills.						
	В	B Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.					
	C						
	D Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.						
	Fail Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. Lack of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.						
Communication- Intensive Course	Ν						
Course Type	Lecture-ba	ased course					
Course Teaching	Activities	6	Details		No. of Hours		
Learning Activities	Lectures				36		
	Tutorials				12		
	Reading /	Self study					
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	100 Assessment Methods to CLO Mappin		
	Assignme	ents		30	CLO 1,2,3,5		
	Project re			30	CLO 1,2,3,4,5		
	Test	r		40	CLO 2,3		
Pequired/recommended		G Witten D H	astie T and Tibshirani P	(2013). An Introduction to Sta			
reading and police materials	Application	ns in R, Springer, Ne	ew York.	lements of Statistical Learning: D	-		
			n, Springer, New York.	iements of Statistical Learning. D			

Course Website		dle.hku.hk	8). Generalized Linear Models with Exa	······································				
STAT3616	Advance	ed SAS program	ming (6 credite)	Academic Ye	ar 2021			
Offering Department	Statistics	50						
Course Co-ordinator		50						
Feachers Involved	100, 5141	FBC, Statistics & Actuarial Science ()						
Course Objectives	This cour	se aims to equip	students, who have taken STAT2603	with a high level of	proficiency in SA			
		programming for automation of procedures and data processing in solving complex problems more efficiently.						
Course Contents & Topics	Overview	Overview of SAS underlying parts. Macro programming. Advanced programming techniques including data simulation, advanced data look-up techniques, modifying transaction datasets and controlling I/O processing and						
Course Learning	On successful completion of this course, students should be able to:							
Dutcomes	CLO 1 U	Jnderstand the syste	em of SAS and basic programming					
	CLO 2 l	Jse the BY statemer	t for parallel processing to aid automati	on				
			et without printing to OUTPUT windows		tion			
			develop customized and automated ap					
		•	programming statements and techniques	s to solve complex proble	ms			
Pre-requisites (and Co-requisites and Impermissible combinations)		TAT2601 or STAT29 are strongly recomn	01 nended to take STAT2603 or STAT2604	prior to taking this cours	e.)			
Offer in 2021 - 2022	N Off	er in 2022 - 2023 : N		Examination				
Grade Descriptors	A		mastery at an advanced level of extensive know		attaining all the cours			
(A+ to F)	learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and ability to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effective organizational and presentational skills.							
	B Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.							
	C Demonstrate general but incomplete command of knowledge and skills required for attaining most of the course learning outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply moderately effective organizational and presentational skills.							
	D Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.							
	Fail Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. Lack of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.							
Communication-	N							
ntensive Course								
Course Type	1	ased course			No. of Hours			
Course Teaching	Activities	5	Details	Details				
& Learning Activities	Lectures				36			
	Tutorials				12			
	Ŭ	/ Self study			100			
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mappin			
	Assignme	ents	Coursework (assignments, tutorials, and a class test)	50	CLO 1,2,3,4,5			
	Examinat	ion	One 2-hour written examination	50	CLO 1,2,3,4,5			
Required/recommended reading and online materials		, A.: Carpenters Co	Advanced Programming for SAS 9, Thin mplete Guide to the SAS Macro Lang		lorth Carolina: SA			
Course Website		dle.hku.hk						
STAT3901	Life con	tingencies I (6 cr	adits)	Academic Ye	ar 2021			

STAT3901	Life con	ntingeno	ies I (6 cre	dits)			Academic Year	2021
Offering Department	Statistics	Statistics & Actuarial Science Quota						
Course Co-ordinator	Prof K C \	Prof K C Yuen, Statistics & Actuarial Science (kcyuen@hku.hk)						
Teachers Involved	(Prof K C	(Prof K C Yuen, Statistics & Actuarial Science)						
Course Objectives	until-death financial in	The major objectives of this course are to integrate life contingencies into a full probabilistic framework. The time- until-death random variable is the basic building block by which models for life insurances, designed to reduce the financial impact of the random event of untimely death, are developed. This course introduces the concepts of life contingencies and the basic mathematical skills for modelling life insurance products.						
Course Contents & Topics				,	fe table functio ble; benefit pre	ns; select and ultima miums.	te tables; life insur	ance models; life
Course Learning	On succes	ssful com	pletion of this	s course, stu	udents should	be able to:		
Outcomes	CLO 1 calculate the expected values, variances, probabilities, and percentiles for survival-time random variables							
					e random varia or fractional ag	able that arises from es	the discrete survi	val-time random
	CLO 3 define present-value-of-benefit random variables defined on survival-time random variables							
					,	es and probabilities tariables, and present		
	CLO 5 ca	alculate b	enefit premiu	ms for life ir	nsurances and	annuities		
Pre-requisites (and Co-requisites and Impermissible combinations)	(Pass in S	STAT290	2 and STAT3 2 and (Pass in 2 and STAT2	n SŤAT3902	2 or already en	rolled in this course))	or	
Offer in 2021 - 2022	Y 1st	sem O	ffer in 2022 -	2023 : Y			Examination	Dec
Grade Descriptors	Α	Demonst	rate thorough m	astery at an a	advanced level of	extensive knowledge and	skills required for att	aining all the course

(A+ to F)		to apply knowledge to a presentational skills.	w strong analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar	r situations. Apply highly effect	tive organizational and
	B C	learning outcomes. Show and some unfamiliar situ	command of a broad range of knowledge and s v evidence of analytical and critical abilities and log ations. Apply effective organizational and presenta ut incomplete command of knowledge and skills	gical thinking, and ability to app ational skills.	bly knowledge to familia
	D	outcomes. Show eviden familiar situations. Apply	ce of some analytical and critical abilities and lo moderately effective organizational and presentat limited command of knowledge and skills require	gical thinking, and ability to ap tional skills.	oply knowledge to mos
	Fail	Show evidence of some knowledge to solve problem.	coherent and logical thinking, but with limited ana lems. Apply limited or barely effective organization evidence of command of knowledge and skills req	lytical and critical abilities. Sho nal and presentational skills.	w limited ability to apply
Communication-	N	of analytical and critica	I abilities, logical and coherent thinking. Show and presentational skills are minimally effective or	very little or no ability to app	
ntensive Course		ased course			
Course Teaching	Activities	5	Details		No. of Hours
Learning Activities	Lectures Tutorials				36 12
	Reading /	Self study			100
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mappin
	Assignme		Coursework (assignments, tutorials, class test(s) and participation)	50	CLO 1,2,3,4,5
.	Examinat		One 3-hour written examination	50	CLO 1,2,3,4,5
Required/recommended reading and online materials	Itasca, Illir Dickson, (nois: The Society of A	, and Waters, H.R.: Actuarial Mathema		
Course Website	_	dle.hku.hk	503)		
STAT3902	Statistic	al models (6 cred	lite)	Academic Yea	ar 2021
Offering Department		& Actuarial Science	11(5)	Quota	
Course Co-ordinator			Science (xujf@hku.hk)	Quota	
Teachers Involved					
		,Statistics & Actuaria			
Course Objectives	This cours study the testing, the both quan	se is on the basis of ' concepts and metho e two major areas of titative skills and qua	I Science) STAT2901 Probability and Statistics: Fo ods of statistics. The course will lay er statistical inference. Through the study o alitative perceptions essential for makin or VEE Mathematical Statistics from the	mphasis on the estimati of this course, students w ng rigorous statistical an	on and hypothesis vill be equipped wit
	This cours study the testing, the both quan course is a Distributio estimator confidence two norma	se is on the basis of ' concepts and metho e two major areas of a titative skills and qua an approved course fr n and density of func (MLE), moment esti e interval estimations al variances, and larg	STAT2901 Probability and Statistics: For ods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the tion of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu	mphasis on the estimati of this course, students wing rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting p normal means, normal v	on and hypothesis rill be equipped witi alysis of data. This maximum likelihooo properties of MLE ariance, the ratio of
Course Objectives Course Contents	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On succes CLO 1 ur est	se is on the basis of ' concepts and metho e two major areas of st titative skills and qua an approved course for n and density of func (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi derstand the importa stimation, confidence	STAT2901 Probability and Statistics: For ods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the tion of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- est. is course, students should be able to: nce of sufficient statistic(s) in data reduc interval estimation, and testing hypothes	mphasis on the estimati of this course, students w ng rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting r normal means, normal v inction, Neyman-Pearsor	on and hypothesis vill be equipped wit alysis of data. This maximum likelihoo oroperties of MLE ariance, the ratio of a Lemma, likelihoo ences such as poin
Course Objectives Course Contents & Topics Course Learning	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On succes CLO 1 ur es CLO 2 de CLO 3 loc CLO 4 fin	se is on the basis of ' concepts and metho e two major areas of a titative skills and qua an approved course fu (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi iderstand the importa timation, confidence trive maximum likeliho cate pivotal quantity to d testing statistic to to	STAT2901 Probability and Statistics: For ods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the tion of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- est. is course, students should be able to: nce of sufficient statistic(s) in data reduc	mphasis on the estimati of this course, students w or rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting p normal means, normal v unction, Neyman-Pearsor ction and statistical infere sis the maximum likelihood es meters mple and/or two-sample r	on and hypothesis vill be equipped with alysis of data. This maximum likelihoor properties of MLE ariance, the ratio of a Lemma, likelihoor ences such as poin timates
Course Objectives Course Contents & Topics Course Learning Outcomes Pre-requisites (and Co-requisites and Impermissible	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On succes CLO 1 ur ess CLO 2 de CLO 3 loo CLO 4 fin wi Pass in S Not for stu	se is on the basis of ' concepts and metho e two major areas of st titative skills and qua an approved course fr n and density of func (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi iderstand the importa timation, confidence i erive maximum likeliho cate pivotal quantity te d testing statistic to te th small sample sizes TAT2901; and	STAT2901 Probability and Statistics: For ods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the stion of random variables; order statistics for normal mean, the difference of two e-sample confidence intervals; power fu- est. is course, students should be able to: nce of sufficient statistic(s) in data reduce interval estimation, and testing hypothes bood estimators of parameters to calculat o construct confidence intervals of paran- est hypotheses associated with one-sam s and non-normal distributions with large sed in STAT2602, or already enrolled in	mphasis on the estimati of this course, students w ng rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting µ normal means, normal v inction, Neyman-Pearsor ction and statistical infere sis the maximum likelihood es meters nple and/or two-sample r is sample sizes	on and hypothesis vill be equipped with alysis of data. This maximum likelihoor properties of MLE ariance, the ratio of a Lemma, likelihoor ences such as poin timates
Course Objectives Course Contents & Topics Course Learning	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On succes CLO 1 un est CLO 2 de CLO 3 lon CLO 4 fin wi Pass in S ^T Not for stu For BSc(A	se is on the basis of ' concepts and metho e two major areas of st titative skills and qua an approved course fr n and density of func (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi derstand the importa timation, confidence rive maximum likeline cate pivotal quantity to d testing statistic to to th small sample sizes TAT2901; and idents who have pass cctuarial Science) stud sem Offer in 2022 -	STAT2901 Probability and Statistics: For ods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the tition of random variables; order statistics mator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- est. is course, students should be able to: nce of sufficient statistic(s) in data reduc interval estimation, and testing hypothes bod estimators of parameters to calculat o construct confidence intervals of parar est hypotheses associated with one-sam is and non-normal distributions with large sed in STAT2602, or already enrolled in dents only.	mphasis on the estimati of this course, students w ng rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting p normal means, normal v inction, Neyman-Pearsor ction and statistical infere sis the maximum likelihood est meters mple and/or two-sample r sample sizes this course; and Examination	on and hypothesis vill be equipped with alysis of data. This maximum likelihooo oroperties of MLE ariance, the ratio of a Lemma, likelihooo ences such as poin timates normal distributions
Course Objectives Course Contents & Topics Course Learning Outcomes Pre-requisites (and Co-requisites and Impermissible combinations) Offer in 2021 - 2022	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On succes CLO 1 un est CLO 2 de CLO 3 loo CLO 4 fin wi Pass in S ^T Not for stu For BSc(A	se is on the basis of ' concepts and metho e two major areas of st titative skills and qua an approved course fr n and density of funco (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi derstand the importa titmation, confidence trive maximum likeliho cate pivotal quantity to d testing statistic to to th small sample sizes TAT2901; and idents who have pass scuarial Science) stud sem Offer in 2022 - Demonstrate thorough r learning outcomes. Shoo	STAT2901 Probability and Statistics: For ods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the tition of random variables; order statistics mator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- est. is course, students should be able to: ince of sufficient statistic(s) in data reduc interval estimation, and testing hypothes bod estimators of parameters to calculat o construct confidence intervals of parar est hypotheses associated with one-san is and non-normal distributions with large sed in STAT2602, or already enrolled in dents only.	mphasis on the estimati of this course, students w ng rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting µ normal means, normal v inction, Neyman-Pearsor ction and statistical infere sis the maximum likelihood es meters nple and/or two-sample r is sample sizes this course; and Examination viedge and skills required for it thinking, with evidence of orig	on and hypothesis ill be equipped wit alysis of data. This maximum likelihood oroperties of MLE ariance, the ratio of h Lemma, likelihood ences such as poin timates normal distributions
Course Objectives Course Contents & Topics Course Learning Outcomes Pre-requisites (and Co-requisites and Impermissible combinations) Offer in 2021 - 2022 Grade Descriptors	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On success CLO 1 ur ess CLO 2 de CLO 3 loc CLO 4 fin wi Pass in S Not for stu For BSc(A B	se is on the basis of ' concepts and metho e two major areas of a titative skills and qua an approved course fi n and density of func (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi iderstand the importa distination, confidence i rive maximum likelihe cate pivotal quantity to d testing statistic to to th small sample sizes TAT2901; and idents who have pass actuarial Science) stud sem Offer in 2022 - Demonstrate thorough r learning outcomes. Show to apply knowledge to presentational skills. Demonstrate substatial learning outcomes. Show and some unfamiliar situ	STAT2901 Probability and Statistics: For ods of statistics. The course will lay er statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the tion of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- st. is course, students should be able to: nce of sufficient statistic(s) in data reduc interval estimation, and testing hypothes bod estimators of parameters to calculat o construct confidence intervals of parar est hypotheses associated with one-san a and non-normal distributions with large sed in STAT2602, or already enrolled in dents only. - 2023 : Y mastery at an advanced level of extensive know w strong analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar command of a broad range of knowledge and s ations. Apply effective organizational and present	mphasis on the estimati of this course, students w grigorous statistical an Society of Actuaries. s, central limit theorem, r of estimators, limiting p normal means, normal v unction, Neyman-Pearsor ction and statistical infere sis the maximum likelihood es meters mple and/or two-sample r sample sizes this course; and Examination r situations. Apply highly effect skills required for attaining at le gical thinking, and ability to app ational skills.	on and hypothesis ill be equipped witi alysis of data. This maximum likelihood properties of MLE ariance, the ratio on a Lemma, likelihood ences such as point timates hormal distributions
Course Objectives Course Contents & Topics Course Learning Outcomes Pre-requisites (and Co-requisites and Impermissible combinations) Offer in 2021 - 2022 Grade Descriptors	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On success CLO 1 ur ess CLO 2 de CLO 3 loc CLO 4 fin wi Pass in S Not for stu For BSc(A B C	se is on the basis of ' concepts and metho e two major areas of a titative skills and qua an approved course fi n and density of func (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te soful completion of thi iderstand the importa stimation, confidence i trive maximum likelind cate pivotal quantity to d testing statistic to to th small sample sizes IAT2901; and idents who have pass actuarial Science) stud sem Offer in 2022 - Demonstrate thorough r learning outcomes. Show and some unfamiliar situ Demonstrate general bu outcomes. Show eviden familiar situations. Apply	STAT2901 Probability and Statistics: For bods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the stion of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- st. is course, students should be able to: nce of sufficient statistic(s) in data reduc interval estimation, and testing hypothes bod estimators of parameters to calculat o construct confidence intervals of parar est hypotheses associated with one-san a and non-normal distributions with large sed in STAT2602, or already enrolled in dents only. - 2023 : Y mastery at an advanced level of extensive know w strong analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar command of a broad range of knowledge and skill ce of some analytical and critical abilities and logi ations. Apply effective organizational and presenta ut incomplete command of knowledge and skill ce of some analytical and critical abilities and logi atoms. Apply effective organizational and presenta	mphasis on the estimati of this course, students w grigorous statistical an- Society of Actuaries. s, central limit theorem, r of estimators, limiting p normal means, normal v unction, Neyman-Pearsor ction and statistical infere sis the maximum likelihood es meters mple and/or two-sample r sample sizes this course; and Examination vledge and skills required for a situations. Apply highly effect skills required for attaining at le gical thinking, and ability to app gical thinking, and ability to app	on and hypothesis ill be equipped wit alysis of data. This maximum likelihood properties of MLE ariance, the ratio of h Lemma, likelihood ences such as poin timates hormal distributions
Course Objectives Course Contents & Topics Course Learning Outcomes Pre-requisites (and Co-requisites and Impermissible combinations) Offer in 2021 - 2022 Grade Descriptors	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On success CLO 1 ur ess CLO 2 de CLO 3 loc CLO 4 fin wi Pass in S Not for stu For BSc(A B	se is on the basis of ' concepts and metho e two major areas of a titative skills and qua an approved course fit an approved course of (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi derstand the importa timation, confidence rrive maximum likelihe cate pivotal quantity to d testing statistic to to th small sample sizes TAT2901; and idents who have pass actuarial Science) stud sem Offer in 2022 - Demonstrate thorough r learning outcomes. Show to apply knowledge to and some unfamiliar situ Demonstrate general bu outcomes. Show eviden familiar situations. Apply Demonstrate partial but Show evidence of some knowledge to solve probi	STAT2901 Probability and Statistics: For bods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the titon of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- st. is course, students should be able to: nce of sufficient statistic(s) in data reduc interval estimation, and testing hypothes bod estimators of parameters to calculat o construct confidence intervals of parar- est hypotheses associated with one-sam a and non-normal distributions with large sed in STAT2602, or already enrolled in dents only. - 2023 : Y mastery at an advanced level of extensive know w strong analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar command of a broad range of knowledge and s w evidence of analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar incomplete command of knowledge and skills ce of some analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar uncomplete command of knowledge and skills requires command of knowledge and skills requires command of knowledge and skills require coherent and logical thinking, but with limited ana lems. Apply limited or barely effective organization lems. Apply dimited or barely effective organization	mphasis on the estimati of this course, students w ng rigorous statistical an Society of Actuaries. s, central limit theorem, r of estimators, limiting µ normal means, normal v unction, Neyman-Pearsor ction and statistical infere sis the maximum likelihood es meters nple and/or two-sample r sample sizes this course; and Examination Vedge and skills required for a thinking, with evidence of orig r situations. Apply highly effect skills required for attaining the gical thinking, and ability to ap atomal skills. d for attaining some of the cou- lytical and critical abilities. Sho nal and presentational skills.	on and hypothesis ill be equipped with alysis of data. This maximum likelihood properties of MLE ariance, the ratio of a Lemma, likelihood ences such as point timates normal distributions Dec attaining all the course inal thought, and ability tive organizational and east most of the course attaining all the course inal thought, and ability tive organizational and east most of the course attaining outcomes w limited ability to apply earning outcomes. Lack
Course Objectives Course Contents & Topics Course Learning Outcomes Pre-requisites (and Co-requisites and Impermissible combinations) Offer in 2021 - 2022 Grade Descriptors (A+ to F)	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On succes CLO 1 ur est CLO 2 de CLO 3 loc CLO 4 fin wi Pass in S Not for stu For BSc(A P B C D Fail	se is on the basis of ' concepts and metho e two major areas of st titative skills and qua an approved course fi n and density of funco (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi derstand the importa timation, confidence i rrive maximum likeliho cate pivotal quantity tr dd testing statistic to tr th small sample sizes TAT2901; and idents who have pass cutuarial Science) stud sem Offer in 2022 - Demonstrate thorough r learning outcomes. Show to apply knowledge to a presentational skills. Demonstrate general bu outcomes. Show eviden familiar situations. Apply Demonstrate partial but Show evidence of some knowledge to solve probi Demonstrate little or no of analytical and critica	STAT2901 Probability and Statistics: For bods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the stion of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- st. is course, students should be able to: nce of sufficient statistics(s) in data reduc interval estimation, and testing hypothes bod estimators of parameters to calculat o construct confidence intervals of parar est hypotheses associated with one-sam a and non-normal distributions with large sed in STAT2602, or already enrolled in dents only. - 2023 : Y mastery at an advanced level of extensive know w strong analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar command of a broad range of knowledge and skills red in strate and critical abilities and logical a tricomplete command of knowledge and skills require coherent and logical thinking, but with limited an is end showledge and skills require coherent and logical thinking, but with limited and times. Apply limited or barely effective organizational is moderately effective organizational and presentat limited optical thinking, but with limited and set of some analytical shifts equire coherent and logical thinking, but with limited and set of some analytical shifts and shifts and shifts and set of some analytical shifts and shifts and shifts and set of some analytical shifts and shifts and shifts and shifts and set of some anal	mphasis on the estimati of this course, students w ng rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting µ normal means, normal v inction, Neyman-Pearsor ction and statistical infere sis we maximum likelihood es meters nple and/or two-sample r s ample sizes this course; and Examination vledge and skills required for i thinking, with evidence of orig r situations. Apply highly effect skills required for attaining at le gical thinking, and ability to ap- ational skills. s required for attaining most gical thinking, and ability to ap- ational skills. I for attaining some of the cou- ulytical and critical abilities. Sho nal and presentational skills. uired for attaining the course li- very little or no ability to app	on and hypothesis ill be equipped witi alysis of data. This maximum likelihood properties of MLE ariance, the ratio of h Lemma, likelihood ences such as point timates hormal distributions Dec attaining all the course inal thought, and ability tive organizational and east most of the course attaining all the course inal thought, and ability tive organizational and east most of the course attaining outcomes units apply earning outcomes. Lack
Course Objectives Course Contents Topics Course Learning Outcomes Pre-requisites (and Co-requisites and Impermissible combinations) Offer in 2021 - 2022 Grade Descriptors (A+ to F) Communication- intensive Course	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On success CLO 2 de CLO 3 loc CLO 4 fin wi Pass in S Not for stu For BSc(A P B C D Fail	se is on the basis of ' concepts and metho e two major areas of st titative skills and qua an approved course fi n and density of funco (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi derstand the importa timation, confidence i rrive maximum likeliho cate pivotal quantity tr dd testing statistic to tr th small sample sizes TAT2901; and idents who have pass cutuarial Science) stud sem Offer in 2022 - Demonstrate thorough r learning outcomes. Show to apply knowledge to a presentational skills. Demonstrate general bu outcomes. Show eviden familiar situations. Apply Demonstrate partial but Show evidence of some knowledge to solve probi Demonstrate little or no of analytical and critica	STAT2901 Probability and Statistics: For bods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the stion of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- est. is course, students should be able to: nce of sufficient statistic(s) in data reduce interval estimation, and testing hypothes bod estimators of parameters to calculat o construct confidence intervals of parar est hypotheses associated with one-san a and non-normal distributions with large sed in STAT2602, or already enrolled in dents only. - 2023 : Y mastery at an advanced level of extensive know w strong analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar command of a broad range of knowledge and s is v evidence of analytical and critical abilities and log ations. Apply effective organizational and presenta inimited command of knowledge and skills require command of knowledge and skills require coherent and logical thinking, but with limited ana lems. Apply limited or barely effective organization evidence of command of knowledge and skills require coherent and logical thinking, but with limited ana lems. Apply limited or barely effective organization evidence of command of knowledge and skills require coherent and logical thinking, but with limited ana lems. Apply limited or barely effective organization evidence of command of knowledge and skills require coherent and logical thinking, but with limited ana lems. Apply limited or barely effective organization evidence of command of knowledge and skills require coherent and logical thinking. Show	mphasis on the estimati of this course, students w ng rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting µ normal means, normal v inction, Neyman-Pearsor ction and statistical infere sis we maximum likelihood es meters nple and/or two-sample r s ample sizes this course; and Examination vledge and skills required for i thinking, with evidence of orig r situations. Apply highly effect skills required for attaining at le gical thinking, and ability to ap- ational skills. s required for attaining most gical thinking, and ability to ap- ational skills. I for attaining some of the cou- ulytical and critical abilities. Sho nal and presentational skills. uired for attaining the course li- very little or no ability to app	on and hypothesis ill be equipped witi alysis of data. This maximum likelihood properties of MLE ariance, the ratio of h Lemma, likelihood ences such as point timates hormal distributions Dec attaining all the course inal thought, and ability tive organizational and east most of the course attaining all the course inal thought, and ability tive organizational and east most of the course attaining outcomes units apply earning outcomes. Lack
Course Objectives Course Contents Topics Course Learning Outcomes Pre-requisites (and Co-requisites and Impermissible combinations) Offer in 2021 - 2022 Grade Descriptors (A+ to F) Communication- intensive Course Course Type	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On success CLO 2 de CLO 3 loc CLO 4 fin wi Pass in S Not for stu For BSc(A P B C D Fail	se is on the basis of ' concepts and metho e two major areas of a titative skills and qua an approved course fi n and density of func (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi iderstand the importa distimation, confidence i rive maximum likelihe cate pivotal quantity to d testing statistic to to th small sample sizes TAT2901; and idents who have pass actuarial Science) stud sem Offer in 2022 - Demonstrate thorough r learning outcomes. Show and some unfamiliar situ Demonstrate general but Show evidence of some knowledge to solve probi Demonstrate little or no of analytical and critica problems. Organization a	STAT2901 Probability and Statistics: For bods of statistics. The course will lay en- statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the stion of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- est. is course, students should be able to: nce of sufficient statistic(s) in data reduce interval estimation, and testing hypothes bod estimators of parameters to calculat o construct confidence intervals of parar est hypotheses associated with one-san a and non-normal distributions with large sed in STAT2602, or already enrolled in dents only. - 2023 : Y mastery at an advanced level of extensive know w strong analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar command of a broad range of knowledge and s is v evidence of analytical and critical abilities and log ations. Apply effective organizational and presenta inimited command of knowledge and skills require command of knowledge and skills require coherent and logical thinking, but with limited ana lems. Apply limited or barely effective organization evidence of command of knowledge and skills require coherent and logical thinking, but with limited ana lems. Apply limited or barely effective organization evidence of command of knowledge and skills require coherent and logical thinking, but with limited ana lems. Apply limited or barely effective organization evidence of command of knowledge and skills require coherent and logical thinking, but with limited ana lems. Apply limited or barely effective organization evidence of command of knowledge and skills require coherent and logical thinking. Show	mphasis on the estimati of this course, students w ng rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting µ normal means, normal v inction, Neyman-Pearsor ction and statistical infere sis we maximum likelihood es meters nple and/or two-sample r s ample sizes this course; and Examination vledge and skills required for i thinking, with evidence of orig r situations. Apply highly effect skills required for attaining at le gical thinking, and ability to ap- ational skills. s required for attaining most gical thinking, and ability to ap- ational skills. I for attaining some of the cou- ulytical and critical abilities. Sho nal and presentational skills. uired for attaining the course li- very little or no ability to app	on and hypothesis ill be equipped witi alysis of data. This maximum likelihood properties of MLE ariance, the ratio of h Lemma, likelihood ences such as point timates hormal distributions Dec attaining all the course inal thought, and ability tive organizational and east most of the course attaining all the course inal thought, and ability tive organizational and east most of the course attaining outcomes units apply earning outcomes. Lack
Course Objectives Course Contents & Topics Course Learning Outcomes Pre-requisites (and Co-requisites and Impermissible combinations) Offer in 2021 - 2022 Grade Descriptors	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On succes CLO 2 de CLO 3 loc CLO 4 fin wi Pass in S Not for stu For BSc(A P B C D Fail N Lecture-ba	se is on the basis of ' concepts and metho e two major areas of a titative skills and qua an approved course fi n and density of func (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi iderstand the importa distimation, confidence i rive maximum likelihe cate pivotal quantity to d testing statistic to to th small sample sizes TAT2901; and idents who have pass actuarial Science) stud sem Offer in 2022 - Demonstrate thorough r learning outcomes. Show and some unfamiliar situ Demonstrate general but Show evidence of some knowledge to solve probi Demonstrate little or no of analytical and critica problems. Organization a	STAT2901 Probability and Statistics: For bods of statistics. The course will lay er statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the titon of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- st. is course, students should be able to: nce of sufficient statistic(s) in data reduc interval estimation, and testing hypothes bod estimators of parameters to calculat o construct confidence intervals of parar est hypotheses associated with one-san a and non-normal distributions with large sed in STAT2602, or already enrolled in dents only. - 2023 : Y mastery at an advanced level of extensive know w strong analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar command of a broad range of knowledge and skill ce of some analytical and critical abilities and logical indens. Apply effective organizational and present to incomplete command of knowledge and skills red for some analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar is of some analytical and critical abilities and logical a bilities, hoglical thinking, but with limited and elims. Apply limited or barely effective organization evidence of command of knowledge and skills require coherent and logical thinking, but with limited and presentational skills are minimally effective or a abilities, logical and coherent thinking. Show and presentational skills are minimally effective or and presentat	mphasis on the estimati of this course, students w ng rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting µ normal means, normal v inction, Neyman-Pearsor ction and statistical infere sis we maximum likelihood es meters nple and/or two-sample r s ample sizes this course; and Examination vledge and skills required for i thinking, with evidence of orig r situations. Apply highly effect skills required for attaining at le gical thinking, and ability to ap- ational skills. s required for attaining most gical thinking, and ability to ap- ational skills. I for attaining some of the cou- ulytical and critical abilities. Sho nal and presentational skills. uired for attaining the course li- very little or no ability to app	on and hypothesis ill be equipped with alysis of data. This maximum likelihood properties of MLE ariance, the ratio of a Lemma, likelihood ences such as point timates normal distributions Dec attaining all the course just mought, and ability tive organizational and east most of the course say knowledge to mass urse learning outcomes. Lack ly knowledge to solve
Course Objectives Course Contents Topics Course Learning Outcomes Pre-requisites (and Co-requisites and Impermissible combinations) Offer in 2021 - 2022 Grade Descriptors (A+ to F) Communication- intensive Course Course Type Course Teaching	This cours study the testing, the both quan course is a Distributio estimator confidence two norma ratio test, On succes CLO 2 de CLO 2 de CLO 2 de CLO 3 loc CLO 4 fin wi Pass in S ⁻ Not for stu For BSc(A Y 1st A B C D Fail N Lecture-ba Activities Lectures Tutorials	se is on the basis of ' concepts and metho e two major areas of a titative skills and qua an approved course fi n and density of func (MLE), moment esti e interval estimations al variances, and larg and goodness of fit te ssful completion of thi iderstand the importa distimation, confidence i rive maximum likelihe cate pivotal quantity to d testing statistic to to th small sample sizes TAT2901; and idents who have pass actuarial Science) stud sem Offer in 2022 - Demonstrate thorough r learning outcomes. Show and some unfamiliar situ Demonstrate general but Show evidence of some knowledge to solve probi Demonstrate little or no of analytical and critica problems. Organization a	STAT2901 Probability and Statistics: For bods of statistics. The course will lay er statistical inference. Through the study of alitative perceptions essential for makin or VEE Mathematical Statistics from the titon of random variables; order statistics imator, Bayesian estimator, properties for normal mean, the difference of two e-sample confidence intervals; power fu- st. is course, students should be able to: nce of sufficient statistic(s) in data reduc interval estimation, and testing hypothes bod estimators of parameters to calculat o construct confidence intervals of parar est hypotheses associated with one-san a and non-normal distributions with large sed in STAT2602, or already enrolled in dents only. - 2023 : Y mastery at an advanced level of extensive know w strong analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar command of a broad range of knowledge and skill ce of some analytical and critical abilities and logical indens. Apply effective organizational and present to incomplete command of knowledge and skills red for some analytical and critical abilities and logical a wide range of complex, familiar and unfamiliar is of some analytical and critical abilities and logical a bilities, hoglical thinking, but with limited and elims. Apply limited or barely effective organization evidence of command of knowledge and skills require coherent and logical thinking, but with limited and presentational skills are minimally effective or a abilities, logical and coherent thinking. Show and presentational skills are minimally effective or and presentat	mphasis on the estimati of this course, students w ng rigorous statistical and Society of Actuaries. s, central limit theorem, r of estimators, limiting µ normal means, normal v inction, Neyman-Pearsor ction and statistical infere sis we maximum likelihood es meters nple and/or two-sample r s ample sizes this course; and Examination vledge and skills required for i thinking, with evidence of orig r situations. Apply highly effect skills required for attaining at le gical thinking, and ability to ap- ational skills. s required for attaining most gical thinking, and ability to ap- ational skills. I for attaining some of the cou- ulytical and critical abilities. Sho nal and presentational skills. uired for attaining the course li- very little or no ability to app	on and hypothesis ill be equipped with alysis of data. This maximum likelihood properties of MLE ariance, the ratio of a Lemma, likelihood ences such as point timates normal distributions <u>Dec</u> attaining all the course inal thought, and ability tive organizational and east most of the course ply knowledge to familia of the course learning ply knowledge to mosi urse learning outcomes. Lack ly knowledge to solve No. of Hours

and Weighting			course grade (%)	Methods to CLO Mapping
	Assignments	Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3,4
	Examination	One 3-hour written examination	75	CLO 1,2,3,4
Required/recommended reading and online materials	2004, 7th edition) Hogg R. V., McKean J. W. & Crai edition) Arnold S. F.: Mathematical Statisti	nd's Mathematical Statistics with Ap g A. T.: Introduction to Mathematica cs (Prentice-Hall, 1990) ntroduction to Mathematical Statistic	al Statistics (Pearson Prer	ntice Hall, 2005, 6th
Course Website	http://moodle.hku.hk			

STAT3903	Stochas	tic models (6 cred	dits)	Academic Yea	ar 2021			
Offering Department	Statistics &							
Course Co-ordinator	Dr K Zhu,	r K Zhu, Statistics & Actuarial Science <i>(mazhuke@hku.hk)</i> Dr K Zhu,Statistics & Actuarial Science)						
Teachers Involved		(Dr K Zhu,Statistics & Actuarial Science) This is an introductory course in stochastic processes. It will cover the basic concents of the theory of stochastic						
Course Objectives	processes Brownian	This is an introductory course in stochastic processes. It will cover the basic concepts of the theory of stochastic processes and explore different types of stochastic processes including Markov chains, Poisson processes and Brownian motions.						
Course Contents & Topics	classificati states, Po Brownian formula, C	ntroduction to probability theory, conditional probability and expectation, Markov chains, random walk models, classification of states in a Markov chain, calculation of limiting probabilities and mean time spent in transient states, Poisson process, distribution of inter-arrival time and waiting time, conditional distribution of the arrival time, Brownian Motion, hitting time and maximum variable, geometric Brownian motion, the Black-Scholes option pricing formula, Gaussian bridge, and stationary processes. Birth-and-death process, branching process and renewal process may also be covered (if time permits).						
Course Learning			s course, students should be able to:					
Outcomes	CLO 1 a	apply the conditioning	method to calculate the mean and pro	bability				
	CLO 2 L	understand the essent	tials of Markov chains, the Poisson pro	cess, and Brownian motic	n			
	CLO 3 L	understand how stoch	astic models can be applied to the stu-	dy of real-life phenomena				
Pre-requisites		TAT2901; and						
(and Co-requisites			ed in MATH3603, or have already enr					
and Impermissible			ed in STAT3603, or have already enro	olled in this course; and				
combinations)		Actuarial Science) stud						
Offer in 2021 - 2022 Grade Descriptors	Y 2nd	sem Offer in 2022	- 2023:Y nastery at an advanced level of extensive kno	Examination	May			
(A+ to F)	B C D Fail	learning outcomes. Show to apply knowledge to a presentational skills. Demonstrate substantial learning outcomes. Show and some unfamiliar situa Demonstrate general bu outcomes. Show evident familiar situations. Apply Demonstrate partial but Show evidence of some knowledge to solve probl Demonstrate little or no e of analytical and critical	v strong analytical and critical abilities and logic a wide range of complex, familiar and unfamili command of a broad range of knowledge and v evidence of analytical and critical abilities and l ations. Apply effective organizational and present it incomplete command of knowledge and ski ce of some analytical and critical abilities and moderately effective organizational and present limited command of knowledge and skills requi coherent and logical thinking, but with limited ar ems. Apply limited or barely effective organization evidence of command of knowledge and skills requi abilities, logical and coherent thinking. Show and presentational skills are minimally effective or command skills are minimally effective or	al thinking, with evidence of orig ar situations. Apply highly effect skills required for attaining at le logical thinking, and ability to ap itational skills. Ills required for attaining most logical thinking, and ability to ap ational skills. red for attaining some of the co- nalytical and critical abilities. Sho onal and presentational skills. equired for attaining the course I v very little or no ability to ap	jinal thought, and abilit tive organizational an east most of the cours oly knowledge to familia of the course learning oply knowledge to mos urse learning outcomes w limited ability to app earning outcomes. Lac			
Communication-	N							
intensive Course	1							
Course Type		ased course	Detelle		Ne of Llos			
Course Teaching	Activities	5	Details		No. of Hours			
& Learning Activities	Lectures							
a Louining / tourning	Testevisle				36			
	Tutorials	Calf atudy			12			
-	Reading /	Self study			12 100			
Assessment Methods			Details	Weighting in final course grade (%)	12			
Assessment Methods	Reading /		Details Coursework (assignments, tutorials, and a class test)	course grade (%)	12 100 Assessment Methods to CLO Mapping CLO 1,2,3			
Assessment Methods and Weighting	Reading / Methods	ents	Coursework (assignments,	course grade (%)	12 100 Assessment Methods to CLO Mapping			
Assessment Methods and Weighting	Reading / Methods Assignme Examinati	ents	Coursework (assignments, tutorials, and a class test)	course grade (%)	12 100 Assessment Methods to CLO Mapping CLO 1,2,3			

STAT3904	Corporate finance for actuarial science (6 credits)	Academic Year	2021	
Offering Department	Statistics & Actuarial Science Quota			
Course Co-ordinator	Dr D Lee, Statistics & Actuarial Science (leedav@hku.hk)			
Teachers Involved	(Dr D Lee, Statistics & Actuarial Science)			
Course Objectives	This course is designed for actuarial science students to receive finance co Finance from the Society of Actuaries. The objective of this course is to intro principles of corporate finance. The course will provide students with a syste evaluate investment and financing decisions for corporations.	duce students to	the fundamental	
Course Contents & Topics	The first part of the course will give an introduction to corporate finance and p covered in STAT2902 and STAT3615. These include financial markets and cor measures and performance assessment of financial performance. The main particular sector of the se	npanies, time valu	ie of money, and	

	pricing m	odel, weighted average	nce including: portfolio theory, Marl cost of capital, market efficiency, c				
	leverage	and firm value, and optio	n pricing models.		-		
Course Learning			ourse, students should be able to:				
Dutcomes			incial manager and the financial dec		ation		
	CLO 2 recall the use of present and future values in calculating the value of bonds and stocks CLO 3 assess financial performance using various investment criteria and techniques of project analysis						
			e portfolio theory, capital asset pricir				
			considered by a company when de of financial leverage and long/short				
		escribe the various forms		t term inancing policies of	n capital structure		
			ons using the binomial option pricing	model			
Pre-requisites		•)2) or (Pass in STAT3610 and STA				
and Co-requisites	L\		in FINA1310, or have already enrol	/1			
and Impermissible			in the formation of have already enrol				
combinations)							
Offer in 2021 - 2022	Y 2n	d sem Offer in 2022 - 2	023 : Y	Examination	May		
Grade Descriptors	Α		ery at an advanced level of extensive kno				
(A+ to F)			ong analytical and critical abilities and logic				
		to apply knowledge to a wi presentational skills.	de range of complex, familiar and unfamilia	ar situations. Apply highly effe	ctive organizational ar		
	В		nmand of a broad range of knowledge and	skills required for attaining at l	east most of the cours		
	B		idence of analytical and critical abilities and I				
		and some unfamiliar situatio	ns. Apply effective organizational and presen	tational skills.			
	С		complete command of knowledge and ski				
			of some analytical and critical abilities and I derately effective organizational and presenta		pply knowledge to mo		
	D		ed command of knowledge and skills requir		urse learning outcome		
			erent and logical thinking, but with limited an				
			s. Apply limited or barely effective organization				
	Fail		ence of command of knowledge and skills re ilities, logical and coherent thinking. Show				
			presentational skills are minimally effective o		ply knowledge to solv		
Communication-	N	·····					
ntensive Course							
Course Type	Lecture-b	ased course					
Course Teaching	Activitie		Details		No. of Hours		
Learning Activities	Lectures		Details		36		
2001 Hig / tot / titleo	Tutorials				12		
					12		
	-	/ Self study					
Assessment Methods	Methods	5	Details	Weighting in final	Assessment		
nd Weighting				course grade (%)	Methods to CLO Mappin		
	Assignm	ents	Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3,4,5,6		
	Examina	tion	One 3-hour written examination	75	CLO 1,2,3,4,5,6		
Required/recommended	Brealey,	R.A. et al.: Principles of C	orporate Finance (McGraw-Hill, 201	7. 12th edition)			
eading and			Pearson, 2017, 4th edition)	.,,			
		•	ets (Pearson, 2013, 3rd edition)				
online materials	McDonal						
	1	odle.hku.hk					
	1	odle.hku.hk					
	1	odle.hku.hk					
Course Website	http://moo			Academic Ye	ar 2021		
Course Website	http://moo	ction to financial der		Academic Ye	ar 2021		
Course Website STAT3905 Dffering Department	http://moo	ction to financial der & Actuarial Science	ivatives (6 credits)	Academic Ye Quota	ar 2021		
Course Website STAT3905 Differing Department Course Co-ordinator	http://mod Introduc Statistics Dr K C Cl	ction to financial der & Actuarial Science heung, Statistics & Actua	ivatives (6 credits)		ar 2021		
Course Website CTAT3905 Differing Department Course Co-ordinator Teachers Involved	http://mod Introduc Statistics Dr K C Cl (Dr K C C	ction to financial der & Actuarial Science heung, Statistics & Actua Cheung,Statistics & Actua	ivatives (6 credits) rial Science <i>(kccg@hku.hk)</i> rial Science)	Quota			
Course Website STAT3905 Difering Department Course Co-ordinator Teachers Involved	http://mod Statistics Dr K C Cl (Dr K C C This cour	ction to financial der & Actuarial Science heung, Statistics & Actua Cheung,Statistics & Actua rse aims at providing an	ivatives (6 credits) rial Science (<i>kccg@hku.hk</i>) rial Science) understanding of the fundamental	Quota concepts of financial der			
Course Website STAT3905 Offering Department Course Co-ordinator Teachers Involved Course Objectives	http://moo Statistics Dr K C Cl (Dr K C C This cour are on ba	ction to financial der & Actuarial Science heung, Statistics & Actua Cheung,Statistics & Actua rse aims at providing an sic trading and hedging s	ivatives (6 credits) rial Science (<i>kccg@hku.hk</i>) rial Science) understanding of the fundamental trategies, and the no-arbitrage princ	Quota concepts of financial der ciple.	ivatives. Emphase		
Course Website	http://mod Statistics Dr K C Cl (Dr K C C This cour are on ba Derivative	ction to financial der & Actuarial Science heung, Statistics & Actua Cheung,Statistics & Actua rse aims at providing an sic trading and hedging s es; short-selling; forward	ivatives (6 credits) rial Science (<i>kccg@hku.hk</i>) rial Science) understanding of the fundamental trategies, and the no-arbitrage princ contracts; call options; put optio	Quota concepts of financial der ciple. ns; equity-linked CD; sp	ivatives. Emphase		
Course Website Course Operatment Course Co-ordinator Feachers Involved Course Objectives Course Contents	http://mod Statistics Dr K C Cl (Dr K C C This cour are on ba Derivative hedging;	ction to financial der & Actuarial Science heung, Statistics & Actua Cheung,Statistics & Actua rse aims at providing an sic trading and hedging s es; short-selling; forward financial forwards and fut	ivatives (6 credits) rial Science (kccg@hku.hk) rial Science) understanding of the fundamental trategies, and the no-arbitrage prime contracts; call options; put optio ures; commodity swaps; interest rat	Quota concepts of financial der ciple. ns; equity-linked CD; sp	ivatives. Emphase		
Course Website Course Department Course Co-ordinator Feachers Involved Course Objectives Course Contents Topics Course Learning	http://mod Statistics Dr K C Cl (Dr K C C This cour are on ba Derivative hedging; On succe	ction to financial der & Actuarial Science heung, Statistics & Actua cheung, Statistics & Actua se aims at providing an sic trading and hedging s se; short-selling; forward financial forwards and fut essful completion of this c	ivatives (6 credits) rial Science (kccg@hku.hk) rial Science) understanding of the fundamental trategies, and the no-arbitrage princ contracts; call options; put optio ures; commodity swaps; interest rat ourse, students should be able to:	Quota concepts of financial der ciple. ns; equity-linked CD; sp e swaps; put-call parity.	ivatives. Emphase		
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Course Website	http://mod Statistics Dr K C Cl (Dr K C CC This cour are on ba Derivative hedging; On succe CLO 1 dc CLO 2 et a CLO 3 e: Pass in S Not for st Not for st Not for st For BSc(/ Y 1st A B C	ction to financial der & Actuarial Science heung, Statistics & Actua cheung, Statistics & Actua se aims at providing an isic trading and hedging s es; short-selling; forward financial forwards and ful essful completion of this c efine and recognize the c valuate the payoff, profit, nd swaps xplain how derivative sec TAT2902; and udents who have passed Actuarial Science) studer is sem Offer in 2022 - 20 Demonstrate thorough mas learning outcomes. Show et to apply knowledge to a wi presentational skills. Demonstrate general but ir outcomes. Show evidence familiar situations. Apply mo Demonstrate partial but limi Show evidence of some coh knowledge to solve problem.	ivatives (6 credits) rial Science (kccg@hku.hk) rial Science) understanding of the fundamental trategies, and the no-arbitrage print contracts; call options; put optio ures; commodity swaps; interest rat ourse, students should be able to: efinitions of terms commonly used i and properties of basic derivative c urities can be used as tools to mana in STAT3618, or have already enrol in FINA2322, or have already enrol ts only. 23 : Y tery at an advanced level of extensive kno rong analytical and critical abilities and logic der range of complex, familiar and unfamilia mmand of a broad range of knowledge and idence of analytical and critical abilities and I s. Apply effective organizational and present ed command of knowledge and skills requir remt and logical thinking, but with limited an	Quota concepts of financial der ciple. ns; equity-linked CD; sp e swaps; put-call parity. n derivatives markets ontracts, including forwar age financial risk lled in this course; and led in this course; and Examination wledge and skills required for at thinking, with evidence of ori ar situations. Apply highly effe skills required for attaining at l ogical thinking, and ability to ap tational skills. Ils required for attaining most ogical thinking, and ability to a ational akills. ed for attaining some of the co alytical and critical abilities. She nal and presentational skills.	Dec attaining all the cours ginal thought, and abili tive organizational ar east most of the cours ply knowledge to famili of the course learning pply knowledge to mo urse learning outcomes w limited ability to apple		

Communication- intensive Course	Ν						
Course Type	Lecture-ba	ased course					
Course Teaching	Activities	5	Details		No. of Hours		
& Learning Activities	Lectures				36		
	Tutorials				12		
		Self study			100		
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mappin		
	Assignme	ents	Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3		
	Examinat	ion	One 2-hour written examinatio	n 75	CLO 1,2,3		
Required/recommended reading and online materials	McDonald	l, R. L.: Derivatives	Markets (Pearson, 2013, 3rd edition)	, Chapters 1-9.			
Course Website	http://moo	dle.hku.hk					
STAT3906	Risk the	Academic Yea	r 2021				
Offering Department		& Actuarial Science	-	Quota			
Course Co-ordinator		0,	Actuarial Science (kccg@hku.hk)				
Feachers Involved		0,	Actuarial Science)				
Course Objectives			ain topics in actuarial science. Risk the		itistical models al		
Course Contents		•	rance problems such as the premium nodels; collective risk models; covera		2		
& Topics	Sevency II	ioueis, irequericy i	noucis, collective lisk models, covera	ye mounications, nak medsule			
Course Learning Dutcomes	CLO 1 un ex CLO 2 es	nderstand the ind spectation of the to stimate the premiu	m of a policyholder and the total cla	ve risk model, evaluate the			
		nounts made in pre	nonly used risk measures and explair	their use and limitation			
Pre-requisites and Co-requisites and Impermissible combinations)	Pass in S		dy enrolled in this course; or				
Offer in 2021 - 2022	Y 1st	sem Offer in 202	22 - 2023 : Y	Examination	Dec		
Grade Descriptors (A+ to F)	A Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for a learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of origin to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effection of the structure of the s						
	presentational skills. B Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.						
	C	 C Demonstrate general but incomplete command of knowledge and skills required for attaining most of the course learnin outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to mo familiar situations. Apply moderately effective organizational and presentational skills. D Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. 					
	Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to applicate the source of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to applicate the source of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to applicate the source of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to applicate the source of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to applicate the source of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to applicate the source of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to applicate the source of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to applicate the source of the						
	of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.						
Communication- ntensive Course	N						
Course Type	Lecture-ba	ased course					
Course Teaching	Activities		Details		No. of Hours		
& Learning Activities	Lectures				36		
	Tutorials				12		
	Reading /	Self study			100		
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mappir		
	Assignme	ents	Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3		
	Examinat	ion	One 3-hour written examinatio	n 75	CLO 1,2,3		
Required/recommended eading and online materials	Klugman 3 2012, 4th		I., & Willmot G. E.: Loss Models: Fro	om Data to Decisions (John V	Viley & Sons, In		
Course Website	http://moo	dle.hku.hk					
	1.1			A	- 0004		
STAT3907			casting (6 credits)	Academic Yea	ir 2021		
Offering Department		& Actuarial Science		Quota			
Course Co-ordinator		Statistics & Actuar Statistics & Actuar	ial Science (gdli@hku.hk)				
		Jausius & Aciual					
Course Objectives			ed statistical methods of linear models	and investigates various fore	casting procedur		

Course Objectives	This course deals with applied statistical methods of linear models and investigates various forecasting procedures through using linear models and time series analysis.
Course Contents & Topics	Regression and multiple linear regression; predicting; time series models including autoregressive, moving average, autoregressive-moving average and integrated models; forecasting.
Course Learning Outcomes	On successful completion of this course, students should be able to:

C C C Pre-requisites (and Co-requisites	CLO 1 CLO 2 CLO 3 CLO 4 CLO 5	do ANOVA and identify and fit	alysis	ssion model to real data		
Pre-requisites Pa (and Co-requisites No	CLO 3 CLO 4	identify and fit	,			
Pre-requisites Pa and Co-requisites No	LO 4			or ARMA model to real c	lata	
Pre-requisites Pa (and Co-requisites No		perform residu				
Pre-requisites Pa (and Co-requisites No			with these fitted me	odels		
(and Co-requisites No				nrolled in this course; an	d	
				0, or have already enrol		
				1, or have already enrol		
combinations) No	ot for stud	dents who have p	bassed in ECON22	30, or have already enro	lled in this course; and	
Fc	or BSc(Ad	ctuarial Science)	students only.	· · · · · · · · · · · · · · · · · · ·		
Offer in 2021 - 2022 Y	2nd	sem Offer in 20	022 - 2023 : Y		Examination	May
Grade Descriptors A (A+ to F)	•	learning outcomes.	Show strong analytical to a wide range of co	and critical abilities and logica	vledge and skills required for a I thinking, with evidence of origi r situations. Apply highly effect	nal thought, and abilit
В	6	learning outcomes.	Show evidence of analy		skills required for attaining at le gical thinking, and ability to appl ational skills.	
C	;	Demonstrate gener outcomes. Show ev	al but incomplete com vidence of some analyti	mand of knowledge and skil cal and critical abilities and lo	s required for attaining most o ogical thinking, and ability to ap	
D	familiar situations. Apply moderately effective organizational and presentational skills. D Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.					
F	Fail Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. Lack of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.					
Communication- N intensive Course		prositiner organiza				
Course Type Le	ecture-ba	sed course				
Course Teaching A	ctivities		Details			No. of Hours
& Learning Activities	ectures					
T	Tutorials					
R	Reading /	Self study				100
	lethods		Details		Weighting in final course grade (%)	Assessment Methods to CLO Mapping
A	ssignmei	nts	,	 (assignments, a computer-based t and a class test) 	25	CLO 1,2,3,4,5
E	xaminatio	on	One 3-hou	written examination	75	CLO 1,2,3,4,5
	braham 8	J. Ledolter: Stat	istical Methods for	Forecasting (John Wiley	precasts (McGraw-Hill, 19 & Sons, 2005, 2nd editio casting and Control (Pren	n) ,

STAT3908	Credibility	theory and loss distributions (6 credits)	Academic Year	2021			
Offering Department	Statistics & A	ctuarial Science	Quota				
Course Co-ordinator	Dr K C Cheur	ng, Statistics & Actuarial Science (kccg@hku.hk)					
Teachers Involved	(Dr K C Cheu	ing,Statistics & Actuarial Science)					
Course Objectives	calculation. I	an example of a statistical estimate. The idea of cred nsurance loss varies according to the business nature, what s is both of theoretical interest and practical importance. This c thods.	distribution should	be used to fit a			
Course Contents & Topics	construction a determination	ation approach; Buhlman's approach; Bayesian approach; em and selection of parametric models; properties and estimation n of the acceptability of a fitted model; comparison of fitted mo andom variables.	of failure time and	loss distributions,			
Course Learning	On successfu	Il completion of this course, students should be able to:					
Outcomes	CLO 1 apply	limited fluctuation (classical) credibility including criteria for both	full and partial cred	bility			
	CLO 2 perfor	rm Bayesian analysis using both discrete and continuous models					
	CLO 3 apply Buhlmann and Buhlmann-Straub models and understand the relationship of these to the Bayesian model						
	CLO 4 apply conjugate priors in Bayesian analysis and in particular the Poisson-gamma model						
	CLO 5 apply empirical Bayesian methods in the nonparametric and semiparametric cases						
	CLO 6 construct and select empirical models						
	CLO 7 determine the acceptability of a fitted model and/or compare models						
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in STAT	2602 or STAT3902 or STAT3906					
Offer in 2021 - 2022	Y 2nd se	m Offer in 2022 - 2023 : Y	Examination	May			
Grade Descriptors (A+ to F)	lea to	emonstrate thorough mastery at an advanced level of extensive knowledge a arning outcomes. Show strong analytical and critical abilities and logical thinking apply knowledge to a wide range of complex, familiar and unfamiliar situatio esentational skills.	, with evidence of origin	al thought, and ability			
	B De lea	emonstrate substantial command of a broad range of knowledge and skills req arning outcomes. Show evidence of analytical and critical abilities and logical thir d some unfamiliar situations. Apply effective organizational and presentational sk	king, and ability to apply				
	ou	emonstrate general but incomplete command of knowledge and skills require itcomes. Show evidence of some analytical and critical abilities and logical thir miliar situations. Apply moderately effective organizational and presentational ski	nking, and ability to appl				

& Learning Activities Lectures 36 Reading / Self study 100 Assessment Methods Methods Velighting in final course grade (%) Assessment Methods Assignments Coursevork (assignments, tatorials, and a class test) 25 CL 0 1 2,3,4,5, tatorials Examination One 3-hour writer examination 76 CL 0 1,2,3,4,5, tatorials Course Velocity Examination 76 CL 0 1,2,3,4,5, tatorials Course Velocity Methods Sees, 20,00 Sees, 20,00 Ordine materials Course Velocity Course Velocity Course Velocity STAT3909 Life contingencies II (6 credits) Academic Year 2021 Offering Department Statistics & Actuarial Science Quota Course Coordinator Dr D Les, Statistics & Actuarial Science Quota Course Coordinator This course ains at introducing some topics in non-traditional life insurance. Emphasis will be placed applications of more advance Heroids of If countingencies and annulles CO 1 3 catolate poly velocity veloces and assochtaics multiple state model framework Course Learning One no caloutale poly velocity veloces and assochtainscies and an		D		but limited command of knowledge and skills requi				
Fail Demonstrate life or no veloces of communit of lesseles, and stills request on values, but any transmitter is any transmi						w limited ability to apply		
Communication- Intensive Course Course Type Course Techning A CdVWites Lactures Lactures Course Techning A CdVWites Lactures A CdVWites Lactures Course Techning A CdVWites Lactures Details Details Methods methods and Weighting Methods Assignments Course Weighting Assignments Course Weighting Course Techning Assignments Course Weighting Course Techning Course Techning Assignments Course Weighting Course Weighting Course Weighting Course Weighting Course Weighting Course Weighting Course Weighting Course Weighting Course Course Course Course Cour		Fail	Demonstrate little of of analytical and c	r no evidence of command of knowledge and skills r ritical abilities, logical and coherent thinking. Show	equired for attaining the course l v very little or no ability to app			
Course Traching & Learning Activities Details No. of Hourse 36 Stassesment Methods and Weighting Activities Details Weighting in final 100 Assessment Methods and Weighting Methods Details Weighting in final 100 Assessment Assessment buttorials, and class tesl 25 CLO 12.3.4.5. Reading / Self study Details Weighting in final 0 ccurse grade (%) Assessment 25 CLO 12.3.4.5. Reading and nonline materials Dotation Concerts 75 CLO 12.3.4.5. Starta 2009 Life contingencies II (6 credits) Academic Year 2021 Other Starta 2009 Life contingencies II (6 credits) Academic Year 2021 Other Starta 2009 Life contingencies II (6 credits) Academic Year 2021 Other Starta 2009 Diff Concerts This course is a continuation of the materials covered in STAT3901. We shall discuss the folio shart discus the folio shart dis		N	problemo: organiza					
Learning Activities Learning Activities 36 Learning Activities Leacures 12 Nassessment Methods Methods Defails Weighting in final course grade (%) Assessment final course grade (%) Assignments Loronswork (assignments) 25 CLO 12.3.4.6; Examination One 3-bour written examination 76 CLO 12.3.4.6; Sources Website http://moode.hku.hk Assessment CLO 12.3.4.6; Statistics & Actuarial Science Quota Sources Overbalt Divisions & Actuarial Science Quota Source Objectives Dr D Lee, Statistics & Actuarial Science Quota Source Objectives This course, Statistics & Actuarial Science Quota Course Content Dr D Lee, Statistics & Actuarial Science Quota Course Content This course, Statistics & Actuarial Science Quota Course Content This course, Statistics & Actuarial Science Quota Course Content This course, Statistis Science Statistis Science	Course Type	Lecture-b	ased course					
Tutorials 12 Assessment Methods and Weighting Methods Details Weighting in final course grade (%) Assessment assessment for CLO Mapping Assessments Coursework (assignments, totolals, and a class test) 25 CLO 12.3.4.5; Evanination More 3 Assessments 25 CLO 12.3.4.5; Inite materials More 3 More 3 CLO 12.3.4.5; CLO 12.3.4.5; Source Vebsite http://moode.hku.hk Methods Quota - Statistics & Actuarial Science Quota - - Orbones Co-ordinate Science (incoder/Binku.hk) Differing Department Statistics & Actuarial Science Quota - Course Co-ordinate Science in non-traditional life insurance. Emphasis will be placed has an on-traditional life insurance. Emphasis will be placed has an on-traditional life insurances and annutiles - - Course Co-ordinate Science in gross premium and calculate policy values based on their applications; provide complexity on warable, policy values; expenses and asset shares; multiple state models and their applications; provide and asset shares; multiple state models with multiple life. Course Co-ordinate Science in gross premium and calculate belicy values based on their applications; provalues; provide and ascid sclass and annutites in m		Activitie	S	Details		No. of Hours		
Reading / Self study Intervent Intervent <thintervent< th=""></thintervent<>	& Learning Activities	Lectures				36		
Sasessment Methods and Weighting Methods Details Weighting in final course grade (%) Assessment assessment butchraits, and a class test) Assessment course grade (%) Assignments Coursevork (assignments, tutorials, and a class test) 25 CLO 12,3,4,5,5 Required/recommended eading and course Webste Methods 0ne 3-hour written examination 75 CLO 12,3,4,5,5 Statistics & Analger H, H, & Willmot G. E.: Loss Models: From Data to Decisions (John Wiley & Sons, 2010, eadino). Sons, 2010, eadino). eadino). STAT3909 Life contingencies II (6 credits) Academic Year 2021 Ourse Ox-ontinues Statistics & Actuarial Science (leadar @hku.hk) Cuota Statistics & Actuarial Science (leadar @hku.hk) Cuota Course Co-ontinues is a continuation of the materials covered in STAT390.1We shall discuss the following topics: fut bes random variable, policy values for tile issuances and annuities						12		
and Weighting Internation Course work (assignments, lutorials, and class less) Course grade (%) (CLO Mapping) Assignments Coursework (assignments, lutorials, and class less) 25 CLO 1.2.3.4.5) Required/recommended Reguired/recommended Reguired/recommended Clo 1.2.3.4.5) Statistics Activity of the examination 75 CLO 1.2.3.4.5) Statistics Activity of the examination of the materials covered in STAT3801. We shall discuss the following topics: full the state model and their applications, prospective state model and annutles Course claraming On successful completion of this course, students should be able to: Course claraming On successful completion of this course, and annutles in mod		Reading	/ Self study			100		
Assignments tutorials, and a class fest) 23 DUD 1.2.3.4.5; Required/recommended Klugman S. A., Panjer H. H., & Willmot G. E.: Loss Models: From Data to Decisions (John Wiley & Sons, 2010, entained matorials Course Vebsite 75 CLO 1.2.3.4.5; STAT3909 Life contingencies II (6 credits) Academic Year 2021 Orbring Department Statistics & Actuarial Science Quota Course Objectives This course aims at introducing some topics in non-traditional life insurance. Emphasis will be placed applications of more advanced theories of the contingencies and asset sheets multiple state models and their applications, pro- traditions of more advanced theories of the contingencies and asset sheets multiple state model and their applications, pro- traditions of the course shall course shall discuss the following topics: full the state model and their applications, pro- cease contents This course is a continuation of the course, students should be able to: CiO 2 incorporate expenses in gross premium and calculate policy values, separates and annulities Cuorse Classitistics & Actuarial Science (acaduate the life insurances and annulities in models with multiple lives CiO 2 acalculate probabilities and acluatate the life insurances and annulities in models with multiple lives CiO 2 acalculate probabilities and acluatate the life insurances and annulities in models with multiple lives CiO 4 analyze multiple life models and calculate the life insurances and annulities in models with multiple lives CiO 4 analyze multiple life models and calculate the life		Methods	5	Details		Assessment Methods to CLO Mapping		
Starting and adding and pating a		Assignm	ents	(U	25	CLO 1,2,3,4,5,6,7		
eading and minime materials in the primode hits in the difference of the prime hit		Examina	tion	One 3-hour written examination	75	CLO 1,2,3,4,5,6,		
STAT3909 Life contingencies II (6 credits) Academic Year 2021 Optering Department Statistics & Actuarial Science Quota	eading and	v	S. A., Panjer H. H	., & Willmot G. E.: Loss Models: From Da	ta to Decisions (John Wile	y & Sons, 2010, 4t		
Origing Department Statistics & Actuarial Science Quota	Course Website	http://moo	odle.hku.hk					
Ortering Department Statistics & Actuarial Science Quota								
Ortering Department Statistics & Actuarial Science Quota		1.12	4)	A1 · · · · · · · · ·	- 0001		
Course Co-ordinator Dr D Lee, Statistics & Actuarial Science (leedav@hku.hk) Course Objectives (Dr D Lee, Statistics & Actuarial Science) Course Objectives This course aims at introducing some topics in non-traditional life insurance. Emphasis will be placed applications of more advanced theories of life contingencies. Stopics This course is a continuation of the materials covered in STAT3901. We shall discuss the following topics: In tops random variable; policy values; expenses and asset shares; multiple state models and their applications; pr testing. Course Learning On successful completion of this course; students should be able to: CLO 1 calculate policy values; expenses in gross premium and calculate policy values based on the gross premium for insurances and annuities. CLO 2 calculate policy values is a containing present values under the multiple state model framework. CLO 3 calculate policy values is and calculate the life insurances and annuities in models with multiple decrements. CLO 5 analyzer multiple life models and calculate the life insurances and annuities in models with multiple lives (CLO 4 analyzer multiple life models only. Pra-requisites and Co-requisites and CSC 4 analyzer multiple intercogin analysis and calculate policy values based on the gross premium for insurances and annuities in models with multiple life models and their applications; provide to a wide range of complet. Pra-requisites and Co-requisites and CSC 4 analyzer multiple iffer models and calculate policy values based on the gross premium for insurance.			•			-		
Description (Dr D Lee,Statistics & Actuarial Science) Course Objectives This course aims at introducing some topics in non-traditional life insurance. Emphasis will be placed applications of more advanced theories of life contingencies. Course Contents This course aims at introducing some topics in non-traditional life insurance. Emphasis will be placed applications; prises and asset shares; multiple state models and their applications; prises and asset shares; multiple state models and their applications; prises and asset shares; multiple state model is and their applications; prises and asset shares; multiple state model framework CLO 2 incorporate expenses in gross premium and calculate policy values based on the gross premium for L insurances and annuities in models with multiple diferential is and actuarial present values under the multiple state model framework CLO 4 analyze multiple difer models and calculate the life insurances and annuities in models with multiple diference in this course; and Pre-requisites and Co-requisites and Co-requisites and Co-requisites and Co-requisites and Co-requisites and Co-requisites and course in provide and state requisites and logical thinking, and and annuities in models with multiple life in 2021 - 2022 - Y 2nd sem Y 2nd sem Offer in 2022 - 2023 : Y Examination Y 2nd sem offer in 2022 - 2023 : Y Examination May CA berositate thorough master at an advalate required for attaining all the course and some and annuities in models with multiple differe oreganizational and presentational within the course and some infi					Quota			
Course Objectives This course aims at introducing some topics in non-traditional life insurance. Emphasis will be placed applications of more advanced there is of life contingencies. Emphasis will be placed applications of more advanced there is of life contingencies. Emphasis will be placed applications of more advanced there is optice some and states is models and their applications; proceeding to a successful completion of the course, students should be able to: Course Learning On successful completion of the course, students should be able to: CLO 1 calculate policy values for life insurances and annuities Course Learning CLO 2 incorporate expenses in gross premium and calculate the life insurances and annuities in models with multiple decrements CLO 3 calculate probabilities and actuarial present values under the multiple state model framework CLO 3 calculate probabilities and actualities and calculate the life insurances and annuities in models with multiple lives. CLO 6 explain the concept of profit testing Pre-requisites and the probabilities and calculate the life insurances and annuities in models with multiple lives. CLO 6 explain the concept of profit testing Pre-requisites and the probabilities on a davanced level of extensive knowledge and skills required for attaining at the concept of profit testing. May A Demonstrate thorough matkey at an advanced level of extensive knowledge and skills required for attaining at the concept of analytical and critical abilities and logical thinking, and ability to apply knowledge to a wite range of complex, familiar and unamilis attaining more				· /				
applications of more advanced theories of life contingencies. Course Contents This course is a continuation of the materials covered in STAT301. We shall discuss the following topics: full toss random variable; policy values; expenses and asset shares; multiple state models and their applications; pr testing. Course Learning On successful completion of this course, students should be able to: CL0 1 calculate policy values for life insurances and annuities CL0 2 incorporate expenses in gross premium and calculate policy values based on the gross premium for linsurances and annuities in models with multiple decrements CL0 5 calculate polocy values and calculate the life insurances and annuities in models with multiple decrements CL0 5 canalyze multiple file models and calculate the life insurances and annuities in models with multiple lives CL0 6 explain the concept of profit testing Pass in STAT3001, or already enrolled in this course; and For BSc(Actuarial Science) students only. May A Demonstrate thoroagin makery at an advanced level of extensive knowledge and skills required for attaining all the course is and possible as and calculate and or calculate policy evalues and analytical and critical abilities. Show wide ange of complex, familiar and out and will be adily to preventational skills. Par-requisites A Demonstrate thoroagin makery at an advanced level of extensive knowledge and skills required for attaining at least most of the course least of the source least of the source least of the source least of the source least of the soures least of the source least of the source least of th								
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S Topics Loss random variable; policy values; expenses and asset shares; multiple state models and their application; presenting. Course Learning Dutcomes On successful completion of this course, students should be able to:								
Dutcomes CL01 calculate policy values for life insurances and annuities CL02 incorporate expenses in gross premium and calculate policy values based on the gross premium for linsurances and annuities CL03 calculate protect expenses in gross premium and calculate policy values based on the gross premium for linsurances and annuities CL03 calculate protect expenses in gross premium and calculate the life insurances and annuities in models with multiple decrements CL06 analyze multiple life models and calculate the life insurances and annuities in models with multiple lives CL05 canalyze multiple life models and calculate the life insurances and annuities in models with multiple lives CL06 explain the concept of profit testing Pre-requisites Pain STAT3301, or already enrolled in this course; and For BSc(Actuarial Science) students only. Strade Descriptors A Demonstrate through mastery at an advanced level of extensive knowledge and skills required for attaining all the course learning outcomes. Show strong analytical and critical abilities and logical thinking, and ability to apply knowledge to faming outcomes. Show widence of analytical and critical abilities and logical thinking, and ability to apply knowledge to faming outcomes. Show widence of analytical and critical abilities and logical thinking, and ability to apply knowledge to faming and sectore berretational skills. B Demonstrate general but incomplete command of knowledge and skills required for attaining nost of the course learn fourcomes. Show widence of analytical and critical abilities and logical thinking. Ana ability to apply knowledge to sectore beretational ski		loss rand						
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STAT3910	Financia	I economics I (6 credits)	Academic Yea	ar 2021		
Offering Department		& Actuarial Science		Quota			
Course Co-ordinator	Prof H L Y	ang, Statistics & A	ctuarial Science (hlyang@hku.hk)				
Teachers Involved		Yang,Statistics & A					
Course Objectives		This course is on option pricing and hedging. The course will concentrate on the theory and idea of derivatives pricing and risk management. Option market; European and American options; conditional expectation and discrete-time martingale, discrete time option-pricing theory; binomial model and its Greeks; true probabilities vs. risk-neutral probabilities; estimation					
Course Contents & Topics	time optior volatility; th	Option market; European and American options; conditional expectation and discrete-time martingale, discrete- time option-pricing theory; binomial model and its Greeks; true probabilities vs. risk-neutral probabilities; estimating volatility; the Black-Scholes formula; implied volatility; option Greeks; market-making and hedging; exotic options. For obtaining IFoA credit, the assessment is different. The assessment becomes final exam (60%), midterm test (10%) and computer-based assignment (30%).					
Course Learning			issignment (30%). this course, students should be able	e to:			
Outcomes	CLO 1 ca cu	lculate option pric rrencies, options o	e using binomial tree, including n futures contracts, and options on	European option, American o bonds	ptions, options on		
	CLO 3 un im	derstand the Black plied volatility	eutral probability, and how to price c-Scholes formula, including the as ing strategies and portfolio, market-	sumptions, the Greek letters, o			
	CLO 5 un	derstand the mark	• • •				
	ex	change options	rate models, including Vasicek models				
		y model					
Pre-requisites (and Co-requisites and Impermissible combinations)	Not for stu		902; and assed in STAT3618, or have alread assed in FINA2322, or have already				
Offer in 2021 - 2022	Y 1st	sem Offer in 202	2 - 2023 : Y	Examination	Dec		
Grade Descriptors (A+ to F)	A	learning outcomes. S	h mastery at an advanced level of extensi how strong analytical and critical abilities ar o a wide range of complex, familiar and u	nd logical thinking, with evidence of original	ginal thought, and ability		
	В	•					
	С	outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply moderately effective organizational and presentational skills.					
	D Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.						
	Fail Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. Lack of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.						
Communication- intensive Course	N	, U					
Course Type	Lecture-ba	ased course					
Course Teaching	Activities	;	Details		No. of Hours		
& Learning Activities	Lectures						
	Tutorials						
	Reading /	Self study			100		
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping		
	Assignme	ents	Coursework (assignmen tutorials, a computer-ba assessment and a class test)	ased 25	CLO 1,2,3,4,5,6,7		
	Examinati	ion	One 3-hour written examinat	ion 75	CLO 1,2,3,4,5,6,7		
Required/recommended reading and			ters 10-14 and 24, 2nd edition, by F r Derivatives, 4th or later edition, by				
online materials							

STAT3911	Financia	al economics II (6 credits) Acade	emic Year	2021
Offering Department	Statistics	& Actuarial Science Quota	l	
Course Co-ordinator	Prof H L Y	Yang, Statistics & Actuarial Science (hlyang@hku.hk)		
Teachers Involved	(Prof H L	Yang, Statistics & Actuarial Science)		
Course Objectives		se is an advanced course on the option pricing theory. The course covers E c calculus, and interest models.	Black-Schol	es equation and
Course Contents & Topics	Sharpe ra option's e	motion; introduction to stochastic calculus; arithmetic and geometric Brow atio and risk premium; Black-Scholes equation; risk-neutral stock-price pr elasticity and volatility; Vasicek, Cox-Ingersoll-Ross, and Black-Derman-Toy id the Sharpe-ratio equality constraint; Black's model; options on zero-coupo ets.	rocess and / models; c	option pricing; lelta-hedging for
Course Learning	On succes	ssful completion of this course, students should be able to:		
Outcomes	CLO 1	understanding measure theory based probability		
Outcomes				
Outcomes	CLO 2	understanding conditional probability and martingale		

	CLO 4		alculus and Ito formula				
Due ve avvi-!+	CLO 5		k-Scholes model and option pricing th	neory			
Pre-requisites	Pass in M	IA I H3603 or STAT3603	3 or STAT3903 or STAT3910				
and Co-requisites and Impermissible							
combinations)							
Offer in 2021 - 2022	Y 2nd	d sem Offer in 2022 - 2	2023 · V	Examination	May		
Grade Descriptors	A 210						
(A+ to F)	<u>^</u>	Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for attaining all the cours learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and abilit to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effective organizational an presentational skills.					
	В	B Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.					
	С	outcomes. Show evidence	incomplete command of knowledge and ski of some analytical and critical abilities and oderately effective organizational and present	logical thinking, and ability to ap			
	D	Show evidence of some co knowledge to solve problem	hited command of knowledge and skills require herent and logical thinking, but with limited ar ns. Apply limited or barely effective organization	nalytical and critical abilities. Sho onal and presentational skills.	w limited ability to appl		
-	Fail	of analytical and critical a	idence of command of knowledge and skills re abilities, logical and coherent thinking. Show d presentational skills are minimally effective of	v very little or no ability to app			
Communication- intensive Course	N						
Course Type		ased course					
Course Teaching	Activities	S	Details		No. of Hours		
& Learning Activities	Lectures				36		
	Tutorials	/ Solf study			12		
Assessment Methods		/ Self study	Dataila	Mojahting in fired	100		
and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping		
	Assignme	ents	Coursework (assignments,	25	CLO 1,2,3,4,5		
	Examinat		tutorials, and a class test) One 3-hour written examination	75	CLO 1,2,3,4,5		
Required/recommended			Markets (2nd edition), Chapters 20, 2	· · · · · · · · · · · · · · · · · · ·	020 1,2,0,4,0		
reading and			Other Derivatives (2008, 7th edition)				
online materials		neridge: A Course in Fin	· · · · · · · · · · · · · · · · · · ·				
	Steven Sh	hreve: Stochastic Calcul	lus for Finance II Continuous-Time M	lodels (2008)			
Course Website		odle.hku.hk		. ,			
		topics in contingen	ncies (6 credits)	Academic Yea	-		
Offering Department	Statistics	& Actuarial Science		Academic Yea Quota	ar 2021 		
Offering Department Course Co-ordinator	Statistics Dr D Lee,	& Actuarial Science Statistics & Actuarial S	cience (leedav@hku.hk)		-		
Offering Department Course Co-ordinator Teachers Involved	Statistics Dr D Lee, (Dr D Lee	& Actuarial Science Statistics & Actuarial S Statistics & Actuarial S	cience (leedav@hku.hk) cience)	Quota			
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STAT3951 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents & Topics	Statistics of Dr D Lee, (Dr D Lee This cours insurance Topics co guarantee	& Actuarial Science Statistics & Actuarial S statistics & Actuarial S se covers more advance ver further analysis of the as and options; equity-ling	cience (leedav@hku.hk) cience)	Quota echniques used in the field and related tests; unit-linke	d of life and non-lif		
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	Tutorials			12
	Reading / Self study			100
Assessment Methods and Weighting	Methods	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping
	Assignments	Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3,4,5,6
	Examination	One 3-hour written examination	75	CLO 1,2,3,4,5,6
Required/recommended reading and online materials	Subject CS2 Risk Modelling and Actuaries, 2018)	matics for Life Contingent Risks (Ca I Survival Analysis, Core Principle urance products and simple dividend	s, Core Reading (Instit	ute and Faculty of
Course Website	http://moodle.hku.hk			

STAT3952	Investm	ent and asset management (6 credits)	Academic Y	ear	2021		
Offering Department		& Actuarial Science	Quota				
Course Co-ordinator	TBC, Stat	tistics & Actuarial Science ()					
Teachers Involved	(TBC,Sta	tistics & Actuarial Science)					
Course Objectives	The main	objective of this course is to introduce students to some of t	he methods and proced	lure	s commonly us		
-	in the ma	nagement of an investment portfolio. Emphasis will be place	ced on methods to tack	е рі	oblems faced		
	insurance	e industry such as investment strategy formulation and interes	st rate risk management				
Course Contents		rse provides an overview on the problems faced by actua					
& Topics		to investment practice. This course will cover the followin		ana	gement Proces		
		ocation, Managing Fixed Income Portfolios and Performance	Measurement.				
Course Learning		ssful completion of this course, students should be able to:					
Outcomes		xplain how an investment policy and an investment strategy of					
		lentify the obligations of a fiduciary in managing investment p					
		escribe how to select an investment strategy for an indiv	idual and the particula	r iss	sues influencin		
		vestment strategies for institutional investors					
		xplain principles of risk-based capital management	ust on spect nortfolio				
		escribe asset allocation strategies that can be used to constru					
		entify and describe financial and non-financial risks faced by		the e	a ata bila bua a ut		
		efine risk metrics to quantify major types of risk exposure, a vestment policy and strategy	ipply ALIM principles to	une	establishment		
		elect or build a benchmark for a given portfolio or portfolio	o management style o	000	ribe and acces		
		erformance measurement methodologies for investment porti		630			
Pre-requisites		TAT3901; and	101100				
(and Co-requisites		udents who have passed in FINA2320, or have already enrol	led in this course: and				
and Impermissible		Actuarial Science) students only.					
combinations)		······································					
Offer in 2021 - 2022	N Off	fer in 2022 - 2023 : N	Examination	1			
Grade Descriptors	Α	Demonstrate thorough mastery at an advanced level of extensive know	wledge and skills required fo	r atta	aining all the cour		
(A+ to F)		learning outcomes. Show strong analytical and critical abilities and logica					
		to apply knowledge to a wide range of complex, familiar and unfamiliar presentational skills.	ar situations. Apply highly eff	ectiv	e organizational a		
	В	Demonstrate substantial command of a broad range of knowledge and	skills required for attaining a	leas	t most of the cour		
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		learning outcomes. Show evidence of analytical and critical abilities and le and some unfamiliar situations. Apply effective organizational and presen	ogical thinking, and ability to a tational skills.	pply	knowledge to famil		
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intensive Course Course Type Course Teaching & Learning Activities Assessment Methods	C D Fail N Lecture-b Activitie Lectures Tutorials Reading Methods	learning outcomes. Show evidence of analytical and critical abilities and learning outcomes. Show evidence of some analytical and critical abilities and learning outcomes. Show evidence of some analytical and critical abilities and learning situations. Apply moderately effective organizational and present Demonstrate general but incomplete command of knowledge and skil Demonstrate partial but limited command of knowledge and skil Demonstrate partial but limited command of knowledge and skills requir Show evidence of some coherent and logical thinking, but with limited an knowledge to solve problems. Apply limited or barely effective organization Demonstrate little or no evidence of command of knowledge and skills requir Demonstrate little or no evidence of command of knowledge and skills requires. Organization and presentational skills are minimally effective organization ased course s Details / Self study	ogical thinking, and ability to a tational skills. IIIs required for attaining morogical thinking, and ability to a tional skills. ed for attaining some of the or alytical and critical abilities. Sonal and presentational skills. equired for attaining the cours: equired for attaining the cours: very little or no ability to a rineffective. Weighting in fina course grade (%) t 50	pply st of apply cours how l e lean pply	knowledge to famil the course learning v knowledge to mo e learning outcome imited ability to ap ning outcomes. La knowledge to sol No. of Hours 36 12 100 Assessmen Methods to CLO Mapping CLO 1,2,3,4,5,6,7, CLO		
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STAT3953			al practice (6 credits)	Academic Yea	2021
Offering Department		& Actuarial Science		Quota	
Course Co-ordinator	-	,	Actuarial Science (benchi@hku.hk)		
Teachers Involved		enchimol,Statistics &	Actuarial Science) about the business environment and		- 1
Course Objectives		actuarial control cycle		a exposes them to practical re	al-world situations
Course Contents			riew on selected materials relating	to the following topics: Role of	of the Professiona
& Topics			in Actuarial Problems, Design and		
			us financial security programmes inc		
			t plans, investment funds and prope	· ·	
Course Learning			is course, students should be able to		
Outcomes			escription of financial security system	ms, common actuarial technic	lues and practica
		xperiences escribe actuarial pract	tices, principles, approaches, metho	de commonalities problems	and solutions
			ces across the traditional areas of pr	· · · · · · · · · · · · · · · · · · ·	
		· ·	ices as applied directly on behalf		providers or as a
		onsultant to those pro		, , ,	
	CLO 5 ap	oply actuarial skills in	nontraditional and emerging areas of	of practice	
			specific mathematical and technical	•	ctuarial courses
• • •		•	ional role as an Associate of the Soc	ciety of Actuaries	
Pre-requisites	Pass in ST	TAT3901.			
and Co-requisites and Impermissible					
combinations)					
Offer in 2021 - 2022	Y 1st	sem Offer in 2022 ·	- 2023 : Y	Examination	No Exam
Grade Descriptors	Α	Demonstrate thorough r	mastery at an advanced level of extensive		ttaining all the course
(A+ to F)			w strong analytical and critical abilities and lo a wide range of complex, familiar and unfa		
		presentational skills.			•
	В		I command of a broad range of knowledge w evidence of analytical and critical abilities a		
			ations. Apply effective organizational and pre-		y knowledge to lamilia
	С	Demonstrate general be	ut incomplete command of knowledge and	skills required for attaining most of	
			nce of some analytical and critical abilities a moderately effective organizational and pres		by knowledge to mos
	D	Demonstrate partial but	limited command of knowledge and skills re	equired for attaining some of the court	
			coherent and logical thinking, but with limite lems. Apply limited or barely effective organized		limited ability to appl
	Fail	Demonstrate little or no	evidence of command of knowledge and skil	Is required for attaining the course le	
			I abilities, logical and coherent thinking. S al and presentational skills are minimally effect		y knowledge to solve
Communication-	N	problems. organizationa			
intensive Course					
Course Type	Lecture-ba	ased course			
Course Teaching	Activities	S	Details		No. of Hours
& Learning Activities	Lectures				
	Tutorials				12
	-	/ Self study			100
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods
and Weighting				course grade (76)	to CLO Mapping
				0.5	
	Presentat	tion	oral presentation	25	CLO 4.5.6
	Presentat Project re		oral presentation written report	25 50	CLO 4,5,6 CLO 4,5,6,7
			-	50	CLO 4,5,6,7
Required/recommended	Project re Test Klugman,	eports S.: Understanding Ad	written report in-class quizzes ctuarial Practice (Society of Actuarie	50 25 s, 2012)	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7
reading and	Project re Test Klugman, Bellis, C.,	eports S.: Understanding Ac Klugman, S., Sheph	written report in-class quizzes ctuarial Practice (Society of Actuarie ierd, J., and Lyon, R.: Understandir	50 25 s, 2012)	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7
reading and	Project re Test Klugman, Bellis, C., Cycle (Inst	eports S.: Understanding Ao Klugman, S., Sheph stitute of Actuaries of A	written report in-class quizzes ctuarial Practice (Society of Actuarie ierd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.)	50 25 s, 2012) g Actuarial Management: The	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 Actuarial Contro
reading and	Project re Test Klugman, Bellis, C., Cycle (Ins Brown, R	eports S.: Understanding Ac Klugman, S., Sheph stitute of Actuaries of <i>J</i> R.L. and Gottlieb, L.f	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an	50 25 s, 2012) g Actuarial Management: The	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 Actuarial Contro
reading and	Project re Test Klugman, Bellis, C., Cycle (Ins Brown, R Insurance	eports S.: Understanding Ac Klugman, S., Sheph stitute of Actuaries of A R.L. and Gottlieb, L.f (ACTEX Publications	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an s, Inc., 2007, 3rd ed.)	50 25 s, 2012) ig Actuarial Management: The d Loss Reserving for Prope	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 Actuarial Contro rty and Casualty
reading and online materials	Project re Test Klugman, Bellis, C., Cycle (Ins: Brown, R. Insurance Segal, S.:	eports S.: Understanding Ac Klugman, S., Sheph stitute of Actuaries of A R.L. and Gottlieb, L.f (ACTEX Publications	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an	50 25 s, 2012) ig Actuarial Management: The d Loss Reserving for Prope	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 Actuarial Contro rty and Casualty
reading and online materials	Project re Test Klugman, Bellis, C., Cycle (Ins: Brown, R. Insurance Segal, S.:	S.: Understanding Ac Klugman, S., Sheph stitute of Actuaries of A R.L. and Gottlieb, L.f (ACTEX Publications Corporate Value of E	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an s, Inc., 2007, 3rd ed.)	50 25 s, 2012) ig Actuarial Management: The d Loss Reserving for Prope	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 Actuarial Contro rty and Casualty
Required/recommended reading and online materials Course Website	Project re Test Klugman, Bellis, C., Cycle (Ins: Brown, R. Insurance Segal, S.: http://moor	S.: Understanding Ac Klugman, S., Sheph stitute of Actuaries of <i>I</i> A.L. and Gottlieb, L.f (ACTEX Publications Corporate Value of E odle.hku.hk	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an s, Inc., 2007, 3rd ed.) Enterprise Risk Management: The N	50 25 s, 2012) Ing Actuarial Management: The d Loss Reserving for Prope ext Step in Business Manager	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 Actuarial Contro rty and Casualty nent (Wiley, 2011
reading and online materials Course Website STAT3954	Project re Test Klugman, Bellis, C., Cycle (Ins: Brown, R. Insurance Segal, S.: http://moor	S.: Understanding Ac Klugman, S., Sheph stitute of Actuaries of J A.L. and Gottlieb, L.f (ACTEX Publications Corporate Value of E odle.hku.hk topics in actuaria	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an s, Inc., 2007, 3rd ed.)	50 25 s, 2012) Ing Actuarial Management: The d Loss Reserving for Prope ext Step in Business Manager Academic Yea	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 Actuarial Contro rty and Casualty nent (Wiley, 2011
reading and online materials Course Website STAT3954 Offering Department	Project re Test Klugman, Bellis, C., Cycle (Ins: Brown, R. Insurance Segal, S.: http://mood	S.: Understanding Ad Klugman, S., Sheph stitute of Actuaries of <i>I</i> A.L. and Gottlieb, L.f. (ACTEX Publications Corporate Value of E odle.hku.hk topics in actuaria & Actuarial Science	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an s, Inc., 2007, 3rd ed.) Enterprise Risk Management: The N	50 25 s, 2012) Ing Actuarial Management: The d Loss Reserving for Prope ext Step in Business Manager	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 Actuarial Contro rty and Casualty nent (Wiley, 2011
reading and online materials Course Website STAT3954 Offering Department Course Co-ordinator	Project re Test Klugman, Bellis, C., Cycle (Ins: Brown, R. Insurance Segal, S.: http://mood	S.: Understanding Ac Klugman, S., Sheph stitute of Actuaries of J A.L. and Gottlieb, L.f (ACTEX Publications Corporate Value of E odle.hku.hk topics in actuaria	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an s, Inc., 2007, 3rd ed.) Enterprise Risk Management: The N	50 25 s, 2012) Ing Actuarial Management: The d Loss Reserving for Prope ext Step in Business Manager Academic Yea	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 Actuarial Contro rty and Casualty nent (Wiley, 2011
reading and online materials Course Website STAT3954 Offering Department Course Co-ordinator Teachers Involved	Project re Test Klugman, Bellis, C., Cycle (Ins: Brown, R. Insurance Segal, S.: http://mood Current Statistics & TBC, Stati	S.: Understanding Ad Klugman, S., Sheph stitute of Actuaries of <i>A</i> A.L. and Gottlieb, L.f. (ACTEX Publications Corporate Value of E odle.hku.hk topics in actuaria & Actuarial Science tistics & Actuarial Scie	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an s, Inc., 2007, 3rd ed.) Enterprise Risk Management: The N al science (6 credits) ence ()	50 25 s, 2012) Ing Actuarial Management: The d Loss Reserving for Prope ext Step in Business Manager Academic Yea Quota	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 e Actuarial Contro rty and Casualty ment (Wiley, 2011 - 2021
reading and online materials Course Website STAT3954 Offering Department Course Co-ordinator Teachers Involved	Project re Test Klugman, Bellis, C., Cycle (Ins: Brown, R. Insurance Segal, S.: http://moor Current Statistics & TBC, Stati	S.: Understanding Ad Klugman, S., Sheph stitute of Actuaries of <i>J</i> L. and Gottlieb, L.f e (ACTEX Publications corporate Value of E odle.hku.hk topics in actuaria & Actuarial Science tistics & Actuarial Science se aims at providing p pability to understand,	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an s, Inc., 2007, 3rd ed.) Enterprise Risk Management: The N al science (6 credits) ence () practical elements for actuarial stude , research in and handle the laws	50 25 s, 2012) ng Actuarial Management: The d Loss Reserving for Prope ext Step in Business Manager Academic Yea Quota	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 e Actuarial Contro rty and Casualty nent (Wiley, 2011 al practice and th
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reading and online materials Course Website	Project re Test Klugman, Bellis, C., Cycle (Ins: Brown, R. Insurance Segal, S.: http://mood Current Statistics & TBC, Stati This cours basic cap benefit stu This cours Actuaries' For Practi Insurance,	S.: Understanding Ac Klugman, S., Sheph stitute of Actuaries of A A.L. and Gottlieb, L.f. (ACTEX Publications Corporate Value of E odle.hku.hk topics in actuaria & Actuarial Science tistics & Actuarial Science isse aims at providing p ability to understand udents in their coming se covers a full rang ' Legal Thinking. tical Actuarial Practic a, it covers the full p and Experience Ana	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an s, Inc., 2007, 3rd ed.) Enterprise Risk Management: The N al science (6 credits) ence () practical elements for actuarial stude , research in and handle the laws g tuture career. ge of topics related to both areas i ee: It covers the major practical to picture of actuarial control cycle i	50 25 s, 2012) ng Actuarial Management: The d Loss Reserving for Prope ext Step in Business Manager Academic Yea Quota ents including daily life actuari as and when situations woul including 1) Practical Actuaria pics in both Life and Casual ncluding Product Pricing, Va	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 e Actuarial Contro rty and Casualty nent (Wiley, 2011 al practice and the d arise, which wil al Practice and 2 ty areas. For Life luation, Financia
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reading and online materials Course Website STAT3954 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents	Project re Test Klugman, Bellis, C., Cycle (Ins: Brown, R. Insurance Segal, S.: http://moor Current Statistics & TBC, Stati This cours basic capa benefit stu This cours Actuaries' For Practi Insurance, Reporting and Valua	S.: Understanding Ac Klugman, S., Sheph stitute of Actuaries of J A.L. and Gottlieb, L.f. (ACTEX Publications Corporate Value of E odle.hku.hk topics in actuaria & Actuarial Science listics & Actuarial Science istics & Actuarial Science istics & Actuarial Science se aims at providing p ability to understand, udents in their coming se covers a full rang ' Legal Thinking. itical Actuarial Practic e, it covers the full p and Experience Ana ation.	written report in-class quizzes ctuarial Practice (Society of Actuarie erd, J., and Lyon, R.: Understandir Australia, 2010, 2nd ed.) R.: Introduction to Ratemaking an s, Inc., 2007, 3rd ed.) Enterprise Risk Management: The N al science (6 credits) ence () practical elements for actuarial stude , research in and handle the laws of future career. ge of topics related to both areas in e: It covers the major practical to picture of actuarial control cycle in lysis. For General Insurance, it cover This is the 7th year of the course an	50 25 s, 2012) Ing Actuarial Management: The d Loss Reserving for Prope ext Step in Business Manager Academic Yeat Quota Academic Yeat Quota ents including daily life actuaria as and when situations woul including 1) Practical Actuaria pics in both Life and Casual ncluding Product Pricing, Va ers the backbone areas including d the full start of a new course	CLO 4,5,6,7 CLO 1,2,3,4,5,6,7 e Actuarial Contro rty and Casualty ment (Wiley, 2011 2021 al practice and the d arise, which wil al Practice and 2 ty areas. For Life luation, Financia ng Product Pricing e structure echoing
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			gal research skills and fundamental ce Industry would also infiltrate the co		of experience from		
Course Learning	0		course, students should be able to:				
Outcomes	CLO 1 h		ing regarding Actuarial Control Cycle	e from A to Z for Life Insu	urance and General		
	CLO 2 possess some experience regarding fundamental actuarial practice through practical project						
			ding of the legal system in Hong Kon		,		
		oossess fundamental kno ort	owledge in certain core legal aspects	s such as the law of con	tract and the law of		
	CLO 5 p	oossess fundamental kno	wledge of the law of insurance				
	CLO 6 d	conduct elementary legal	researches when facing with legal pl	roblems			
	CLO 7 ι	understand the basic eler	ments of a routine judgment, the mat	rix of the facts and the law	v involved		
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in S	Pass in STAT3901, or already enrolled in this course; or Pass in STAT3909, or already enrolled in this course; and For BSc(Actuarial Science) students only.					
Offer in 2021 - 2022	N O	ffer in 2022 - 2023 : N		Examination			
Grade Descriptors (A+ to F)	Α	A Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for attaining all the course learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and ability to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effective organizational and presentational skills.					
	В	Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.					
	С	Demonstrate general but incomplete command of knowledge and skills required for attaining most of the course learning outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply moderately effective organizational and presentational skills.					
	D	Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.					
	Fail						
Communication- intensive Course	N						
Course Type	Lecture-	based course					
Course Teaching	Activitie	es	Details	No. of Hours			
& Learning Activities	Lectures	5		36			
	Tutorials			12			
	Reading	g / Self study		100			
Assessment Methods and Weighting	Method	S	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping		
	Assignm	nents	Coursework (assignments, practical project & class test(s))	100	CLO 1,2,3,4,5,6,7		
Course Website	http://mo	odle.hku.hk					

STAT3955	Surviv	al analysis (6 credits)		Academic Year	2021				
Offering Department	Statistics	s & Actuarial Science		Quota					
Course Co-ordinator	Dr J F X	Dr J F Xu, Statistics & Actuarial Science (xujf@hku.hk)							
Teachers Involved	(Dr J F)	(Dr J F Xu, Statistics & Actuarial Science)							
Course Objectives		This course is concerned with how models which predict the survival pattern of humans or other entities ar established. This exercise is sometimes referred to as survival-model construction.							
Course Contents & Topics	include: commor survival from pos kernel d means c	The nature and properties of parametric and nonparametric survival models will be studied. Topics to be covered include: the introduction of some important basic quantities like the hazard function and survival function; some commonly used parametric survival models; concepts of censoring and/or truncation; parametric estimation of the survival distribution by maximum likelihood estimation method; nonparametric estimation of the survival functions from possibly censored samples by means of the Kaplan-Meier estimator, the Nelson-Aalen estimator; and the kernel density estimator or the Ramlau-Hansen estimator and comparisons of k independent survival functions by means of the generalized log-rank test; parametric regression models; Cox's semiparametric proportional hazards regression model; and multivariate survival analysis.							
Course Learning	On succ	cessful completion of this course, students should be a	ble to:						
Outcomes	CLO 1 acquire a clear understanding of the nature of failure time data or survival data, a generalization of the concept of death and life								
	CLO 2 perform estimation for some commonly used survival models under different types of censoring mechanisms								
	CLO 3 analyze survival data using the Cox's semiparametric proportional hazards model								
	CLO 4 extend the Cox's model to a multivariate setup to accommodate multivariate survival data								
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in	STAT3902, or already enrolled in this course; or STAT3600 or STAT3901; students who have passed in STAT3955, or already er	nrolled in this cours	e.					
Offer in 2021 - 2022	N O	Offer in 2022 - 2023 : N		Examination					
Grade Descriptors (A+ to F)	A Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for attaining all the cours learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and abil to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effective organizational ar presentational skills.				al thought, and ability				
	B Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.								
	С	Demonstrate general but incomplete command of knowledg outcomes. Show evidence of some analytical and critical abil familiar situations. Apply moderately effective organizational an	ities and logical thinking						
	D								

	knowledge to solve p Fail Demonstrate little or of analytical and criteria.	Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to appl knowledge to solve problems. Apply limited or barely effective organizational and presentational skills. Fail Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. Lac of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.						
Communication- intensive Course	N							
Course Type	Lecture-based course							
Course Teaching	Activities	Details		No. of Hours				
& Learning Activities	Lectures			36				
	Tutorials							
	Reading / Self study			100				
Assessment Methods and Weighting	Methods	Details	Details Weighting in final course grade (%)					
	Assignments	Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3,4				
	Examination	One 3-hour written examination	75	CLO 1,2,3,4				
Required/recommended reading and online materials	Cox, D. R. and Oakes, D.: Analysis of Survival Data (Chapman and Hall, 1984) Hosmer, D. W. and Lemeshow, S.: Applied Survival Analysis: Regression Modeling of Time to Event Data (Wiley, 1999) Klein, J. P. and Moeschberger, M. L.: Survival Analysis: Techniques for Censored and Truncated Data (Springer Verlag, New York, 2005, 2nd ed.)							
Course Website	http://moodle.hku.hk	,						

STAT3956	Pensior	n funds and pensio	n mathematics (6 credits)	Academic Ye	ar 2021			
Offering Department		& Actuarial Science		Quota				
Course Co-ordinator	Prof G Ma	a, Statistics & Actuarial	Science (gma328@hku.hk)					
Feachers Involved	(Prof G M	la, Statistics & Actuarial	Science)					
Course Objectives	of pension	This course covers the basics of pension plan design and pension fund management, as well as the fundamental of pension plan valuations using different actuarial cost methods. The students will be introduced to the applicatio of actuarial valuation techniques to the funding and accounting of pension plans.						
Course Contents & Topics	obligation	The following topics will be covered: Fundamentals of private pension plans; pricing and valuation of pensior obligations; actuarial cost methods and their effects on cost patterns; selection of actuarial assumptions; principles of asset and liability management.						
Course Learning	On succe	ssful completion of this	course, students should be able to:					
Outcomes	CLO 1	calculate the pension b	enefits in accordance with the provisi	ions of a pension plan				
	CLO 2	calculate the normal co	ost and actuarial liabilities using different	ent actuarial cost methods	3			
	CLO 3	perform gain and loss a	analyses for pension valuations					
	CLO 4	select appropriate assu	umptions and methods for funding or a	accounting purposes				
	CLO 5	interpret the valuation i	results presented in actuarial valuation	n reports				
	CLO 6	understand the principl	es of asset and liability modeling as r	elated to pension plans				
Pre-requisites (and Co-requisites and Impermissible combinations)	For BSc(A	iss in STAT3909; and ir BSc(Actuarial Science) students only.						
Offer in 2021 - 2022	Y 1st	sem Offer in 2022 - 2	em Offer in 2022 - 2023 : Y Examination					
Grade Descriptors (A+ to F)	Α	A Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for attaining all the course learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and ability to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effective organizational and presentational skills.						
	В	Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.						
	С	Demonstrate general but incomplete command of knowledge and skills required for attaining most of the course learning outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply moderately effective organizational and presentational skills.						
	D	Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.						
	Fail Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. Lack of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.							
Communication-	N	, i i i i i i i i i i i i i i i i i i i						
intensive Course								
Course Type	Lecture-b	ased course						
Course Teaching	Activitie	s	Details		No. of Hours			
& Learning Activities	Lectures				36			
	Tutorials				12			
	Reading	/ Self study			100			
Assessment Methods and Weighting	Methods	5	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping			
	Assignments		Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3,4,5,6			
	Examina	tion	One 3-hour written examination	75	CLO 1,2,3,4,6			
Required/recommended reading and online materials	McGill, D William H Morneau Actuarial Actuarial	M., Brown, K.N. , Hale . Aitken: Problem-Solvi Sobeco: Handbook of Standard of Practice N	athematics for Actuaries (2006, 3rd ec y, J.J., Schieber, S.J.: Fundamentals ng Approach to Pension Funding and Canadian Pension & Benefit Plans (20 o. 27, Selection of Economic Assump No. 35, Selection of Demographic	of Private Pensions (2010 I Valuation, (2nd edition). 016, 16th Edition) tions for Measuring Pensi	on Obligations			

	Actuarial Standard of Practice No. 44, Selection and Use of Asset Valuation Methods for Pension Valuations David Farber, ASA, EA, MSPA, William Farrimond, FSPA, Duane Mayer, MSPA, George Matray, FSPA: Actuarial
	Cost Methods-A Review, 3rd Edition, 1999, ACTEX Publications
	2001 Supplement to Actuarial Cost Methods-A Review, ACTEX Publications Ma C M George: Fundamentals of Pension Funds and Pension Mathematics. Peking University Press (2015)
Course Website	http://moodle.hku.hk

STAT4602	Multivari	ate data analysis (6 credits)	Academic Yea	r 2021		
Offering Department		& Actuarial Science		Quota	50		
Course Co-ordinator	Prof T W K	KFung, Statistics & Act	tuarial Science (wingfung@hku.hk)				
Feachers Involved	(Prof T W	K Fung, Statistics & Act	tuarial Science)				
Course Objectives	In many designed experiments or observational studies, the researchers are dealing with multivariate data, wher each observation is a set of measurements taken on the same individual. These measurements are ofter correlated. The correlation prevents the use of univariate statistics to draw inferences. This course develops th statistical methods for analysing multivariate data through examples in various fields of application and hands-o experience with the statistical software SAS.						
Course Contents & Topics	Problems covariance componen	with multivariate data. e matrix. Correlations ts analysis. Factor a	Multivariate normality and transfor : Simple, partial, multiple and analysis. Problems for means of	canonical. Multivariate reg several samples. Multiva	ression. Principal		
D			Classification. Multivariate linear m				
Course Learning Dutcomes	On successful completion of this course, students should be able to: CLO 1 analyze multivariate data with main SAS procedures, such as PROC IML, PROC REG, PROC CORR, PROC CANCORR, PROC PRINCOMP, PROC FACTOR, PROC DISCRIM, PROC CANDISC and etc CLO 2 compare the mean structure of multiple measurements for one or more than one population(s) by						
		ultivariate MANOVA an restigate the linear ass	d profile analysis sociations among one/two group(s)	of variables by multiple, pa	rtial and canonica		
	CLO 4 ex	rrelation and multivaria plore the latent linear alysis and factor analys	structure of a data set with multi	iple measurements by prin	cipal components		
	CLO 5 cla	ssify observations of a	population with one or more than o	ne measurements by discri	minant analysis		
Pre-requisites and Co-requisites and Impermissible combinations)	Pass in STAT3600 or STAT3907						
Offer in 2021 - 2022	Y 2nd	sem Offer in 2022 - 2	2023 : Y	Examination	May		
Grade Descriptors (A+ to F)	A	Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for attaining all the course learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and ability to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effective organizational and presentational skills.					
	В	Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.					
	С	Demonstrate general but incomplete command of knowledge and skills required for attaining most of the course learning outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply moderately effective organizational and presentational skills.					
	D	Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.					
	Fail	Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. Lack of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.					
Communication- Intensive Course	N						
Course Type	Lecture-ba	ised course					
Course Teaching	Activities		Details		No. of Hours		
& Learning Activities	Lectures				36		
	Tutorials				12		
	Reading /	Self study			100		
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mappin		
	Assignments		Coursework (assignments, tutorials, and a class test)	40	CLO 1,2,3,4,5		
	Examinati	on	One 3-hour written examination 60 CLO 1,2,3,4,5				
Required/recommended reading and online materials	Examination One 3-hour written examination 60 CLO 1,2,3,4,5 Johnson, R. A. & Wichern, D. W.: Applied Multivariate Statistical Analysis (Prentice-Hall, 2007, 6th edition) Mardia K. V., Kent J. T., and Bibby J. M.: Multivariate Analysis (Academic Press, 1979) Seber G. A. F.: Multivariate Observations (John Wiley & Sons, 1984) Morrison D. F.: Multivariate Statistical Methods (McGraw-Hill, 1990, 3rd ed.) Hair J. F., Anderson R. E., Tatham R. L., & Black W. C.: Multivariate Data Analysis (Prentice-Hall, 2006, 6th edition Srivastava M. S.: Methods of Multivariate Statistics (John Wiley and Sons, 2002)						
		ials on-line: Use the HE dle.hku.hk	ELP putton.				

STAT4607	Credit risk analysis (6 credits)	Academic Year	2021
Offering Department	Statistics & Actuarial Science	Quota	
Course Co-ordinator	Dr K P Wat, Statistics & Actuarial Science (watkp@hku.hk)		
Teachers Involved	(Dr K P Wat, Statistics & Actuarial Science)		
Course Objectives	Credit risk has always been a significant financial risk in the banking industry. I arising from defaults on debts, swaps, or other counterparty instruments. Credit in the value of an asset resulting from a change in the counterparty's creditword students to quantitative models for measuring and managing credit risk. It also	risk may also res thiness. This cou	ult from a change rse will introduce

		it risk models operate.	ethodology used in the financial in	using and the regulatory			
Course Contents & Topics	internal	rating models; Credit po	rates and loss given default; Defa rtfolio models such as CreditMetr				
Course Learning		h; Credit derivatives. essful completion of this c	ourse, students should be able to:				
Outcomes		understand the Basel requ					
	CLO 2 e	estimate credit scores usir	ng the logit model				
			default probabilities using various	approaches such as Moo	ody's KMV and the		
		mortality method					
		understand the concept of estimate default correlatior	credit Value-at-Risk and the Credit	Metrics approach			
		assess credit rating system					
Pre-requisites		÷ .	or STAT3910 or (FINA2322 and any	University level 3 course)		
(and Co-requisites and Impermissible					/		
combinations) Offer in 2021 - 2022	Y 2r	nd sem Offer in 2022 - 2	023 · V	Examination	Mov		
Grade Descriptors	A 21		tery at an advanced level of extensive kno		May attaining all the course		
(A+ to F)	^	learning outcomes. Show st	ong analytical and critical abilities and logic de range of complex, familiar and unfamil	al thinking, with evidence of ori	ginal thought, and ability		
	В	learning outcomes. Show ev	mmand of a broad range of knowledge and idence of analytical and critical abilities and	logical thinking, and ability to ap			
	С	Demonstrate general but in outcomes. Show evidence of	ns. Apply effective organizational and presen acomplete command of knowledge and sk of some analytical and critical abilities and	ills required for attaining most logical thinking, and ability to a			
	D	Demonstrate partial but limit Show evidence of some coh	derately effective organizational and present ted command of knowledge and skills requi erent and logical thinking, but with limited a	red for attaining some of the co nalytical and critical abilities. Sho			
	Fail	Demonstrate little or no evid of analytical and critical ab	knowledge to solve problems. Apply limited or barely effective organizational and presentational skills. Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. Lack of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve				
Communication-	N	proplems. Organization and	presentational skills are minimally effective of	n menecuve.			
intensive Course							
Course Type	Lecture-	based course					
Course Teaching	Activitie	es	Details	No. of Hours			
& Learning Activities	Lectures				36		
	Tutorials			12			
		g / Self study			100		
Assessment Methods and Weighting	Method	S	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping		
	Assignments		Coursework (assignments, tutorials, and class test(s))	40	CLO 1,2,3,4,5,6		
	Examina		One 2-hour written examination	60	CLO 1,2,3,4,5,6		
reading and online materials	Resti, A. Models t Saunder Value at Crouhy, Jorion, P Hull, J. C Hull, J. C Gujarati,	 Bluhm, C., Overbeck, L., and Wagner, C. (2010). Introduction to Credit Risk Modeling (2nd Edition). CRC Press. öffler, G. and Posch, P. N. (2011). Credit Risk Modeling using Excel and VBA (2nd Edition). Wiley. Resti, A. and Sironi, A. (2007). Risk Management and Shareholders' Value in Banking: From Risk Measureme Models to Capital Allocation Policies. Wiley. Baunders, A. and Allen, L. (2010). Credit Risk Measurement In and Out of the Financial Crisis: New Approaches /alue at Risk and Other Paradigms (3rd Edition). Wiley. Crouhy, M., Galai, D., and Mark, R. (2001). Risk Management. McGraw-Hill. Iorion, P. (2011). Financial Risk Manager Handbook (6th Edition). Wiley. Hull, J. C. (2018). Risk Management and Financial Institutions (5th Edition). Wiley. Gujarati, D. N. and Porter, D. C. (2009). Basic Econometrics (5th Edition). McGraw-Hill. Grayari, D. N. and Porter, D. C. (2009). Basic Econometrics (5th Edition). McGraw-Hill. Grayari, D. N. and Porter, D. C. (2019). Econometrics (5th Edition). McGraw-Hill. Grayari, D. N. and Porter, D. C. (2019). Basic Econometrics (5th Edition). McGraw-Hill. Gregory, J. (2015). The xVA Challenge: Counterparty Credit Risk, Funding, Collateral and Capital (3rd Editior Viley. 					
Course Website	http://mo	odle.hku.hk					
STAT4608	Market	risk analysis (6 cred	its)	Academic Ye	ar 2021		
Offering Department		s & Actuarial Science	,	Quota			
Course Co-ordinator		u, Statistics & Actuarial Sc	ience (mazhuke@hku.hk)				
Teachers Involved		u,Statistics & Actuarial Sc					
Course Objectives	methods	for measuring risk, parti les covering the measure	experienced a revolution in the las cularly Value-at-Risk (VaR). This ment of market risk using VaR m	course introduces moder	n risk managemen		
Course Contents & Topics	Risk Mea	asures; Value-at-Risk (Va apping; Advanced VaR mo	R) models (parametric, Monte Cal odels (GARCH-type models, extren cktesting and stress testing.				
Course Learning			ourse, students should be able to:				
Outcomes	CLO 1		expected shortfall as risk measure	S			
	CLO 2	compute VaR and ex					
	CLO 3		GARCH-type models				
	CLO 4	understand extreme-					
Due ve avri-!+	CLO 5		ing and stress testing				
Pre-requisites (and Co-requisites		STAT3907 and STAT3910 STAT4601 and (FINA2320					

and Impermissible combinations)							
Offer in 2021 - 2022	Y 2nd	sem Offer in 2022 - 2	2023 : Y			Examination	May
Grade Descriptors (A+ to F)	A Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for attaining all the course learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and ability to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effective organizational and presentational skills.						
	В	B Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.					
	С	Demonstrate general but incomplete command of knowledge and skills required for attaining most of the course learning outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply moderately effective organizational and presentational skills.					
	D Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.						
	Fail	Demonstrate little or no ev of analytical and critical a problems. Organization and	idence of command of abilities, logical and	f knowledge and skills re coherent thinking. Show	equired for at very little o	taining the course le	
Communication- intensive Course	N						
Course Type	Lecture-ba	ased course					
Course Teaching	Activities		Details				No. of Hours
& Learning Activities	Lectures						36
	Tutorials						12
	Reading / Self study						100
Assessment Methods and Weighting	Methods		Details		•	ting in final e grade (%)	Assessment Methods to CLO Mapping
	Assignme	ents	Coursework tutorials, and a	(assignments, class test)		40	CLO 1,2,3,4,5
	Examinat	ion	One 2-hour wr	tten examination		60	CLO 1,2,3,4,5
Required/recommended reading and online materials							
Course Website	http://moo	dle.hku.hk	•	·			
STAT4711	Capstor credits)	ne experience for a	ctuarial sciend	e undergraduate	es (6	Academic Year	r 2021
Offering Department	Statistics	& Actuarial Science				Quota	50
Course Co-ordinator	Prof G Yir	n, Statistics & Actuarial	Science <i>(ug_en</i> q	uiry@saas.hku.hk)			
Teachers Involved	(Various t	eachers as the assesso	ors of oral presen	ations and written re	eports Stat	tistics & Actuaria	I Science)

es & Actuarial Science) mulate and investigate practical iniques learnt in their university f-learning skills, and to enable ling definition of the problem, 120-140 hours working on this a teacher and/or an industry e weeks before the end of the				
niques learnt in their university f-learning skills, and to enable ling definition of the problem, 120-140 hours working on this a teacher and/or an industry				
a teacher and/or an industry				
Topics acceptable for projects in this course can be related to any of the traditional actuarial areas of practice such as life insurance, pension, finance, investment, enterprise risk management and general insurance. Students are also encouraged to suggest topics in non-traditional actuarial areas provided they can find a suitable teacher and/or industry supervisor. All topics for this course will be subject to final approval by the Department to ensure relevance to actuarial science.				
Students will need to decide on the topic for a practical project, conduct market research regarding industry activities related to the topic, and make suggestion on a solution of the problem identified in their project.				
On successful completion of this course, students should be able to:				
CLO 1 define a practical problem, discuss the issues faced by different stakeholders, and design workable solutions for the problems				
CLO 2 integrate theoretical results and practical approaches, and to specify limitations of current developments				
CLO 3 work in a team and to collaborate with members with different background				
CLO 4 deliver actuarial results effectively in a written report and in oral presentations				
CLO 5 develop further logical, critical thinking, creativity, technical report writing, communication and consultation skills				
CLO 6 explain to a non-actuarial audience the approaches of actuarial science as applied to problems in a financial security system				
es in BSc(Actuarial Science) exclusive with STAT4767 and				
dy.				
amination No Exam				
required for attaining all the course				
vidence of original thought, and ability ly highly effective organizational and				

Course Website		odle.hku.hk	•				
	Researc	h report	written report	50	CLO 1,2,3,4,5		
	Oral presentation		oral presentation, progress, attendance and in-class discussion	50	CLO 1,2,3,4,5,6		
Assessment Methods and Weighting	Methods	S	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping		
& Learning Activities	Reading	/ Self study	Tutorials, group work/project, rea	ding/self-study	120		
Course Teaching	Activities		Details	Details			
Course Type	Project-b	ased course					
Communication- intensive Course	Ν						
	Fail	to evidence of command of knowledge and skills ical abilities, logical and coherent thinking. Sho in and presentational skills are minimally effective	ow very little or no ability to ap				
	D	Demonstrate partial but limited command of knowledge and skills required for attaining some of the cours Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.					
	C	Demonstrate general but incomplete command of knowledge and skills required for attaining most o outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to app familiar situations. Apply moderately effective organizational and presentational skills.					
	В	Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to and some unfamiliar situations. Apply effective organizational and presentational skills.					

STAT4767	Actuarial	science internshi	p (6 credits)	Academic Ye	ar 2021		
Offering Department	Statistics &	Actuarial Science	- · · · ·	Quota			
Course Co-ordinator	Dr K P Wat,	Statistics & Actuaria	Science (watkp@hku.hk)				
Teachers Involved	(Various tea	chers as the assesso	ors of oral presentations and written	reports, Statistics & Actuar	ial Science)		
Course Objectives			al science students who take on a lete this course as a project based		lar internships. The		
Course Contents & Topics	encountered	d by the student durin	en report which should emphasize ng his/her internship. In many situa ed in during his/her internship.				
Course Learning	On successful completion of this course, students should be able to:						
Outcomes	CLO 1 gain practical experiences during internship						
	CLO 2 describe basic actuarial practices learned during the internship						
	CLO 3 ex	xplain how actuarial t	heories learned in University can be	e applied in practice			
	CLO 4 pr	rovide context for spe	cific technical skills developed in ba	asic actuarial courses			
Pre-requisites (and Co-requisites and Impermissible combinations)	programme This capstor	ass in at least 24 credits of advanced level disciplinary core/elective courses in BSc(Actuarial Science) ogramme including STAT3901; and nis capstone course is only for BSc(Actuarial Science) students; and is mutually exclusive with STAT4711. ne earliest that a student is allowed to take this capstone course is their year 3 study.					
Offer in 2021 - 2022	Y 1st se	em 2nd sem Offer	r in 2022 - 2023 : Y	Examination	No Exam		
Grade Descriptors Distinction/Pass/Fail	Distincti on Demonstrates excellent ability in applying knowledge to solve problems in the workplace. Demonstrates excellent performance in handling and carrying out the work required in the job or assigned by supervisor(s). Establishes highly effective collaboration and communication with supervisor(s), colleagues, and clients in the job. Successfully fulfills the requirements set out in the Course Description regarding working hours, with excellent performance in written and oral report, and excellent evaluation by supervisor(s), etc.						
	Pass Able to apply knowledge to solve problems in the workplace. Successfully handles and carries out the work required in the job or assigned by supervisor(s). Establishes effective collaboration and communication with supervisor(s), colleagues, and clients in the job. Successfully fulfills the requirements set out in the Course Description regarding working hours, written and oral report, and evaluation by supervisor(s), etc. Students demonstrating excellent performance in the above would be awarded a grade of "Distinction".						
	Fail Very limited or no ability to solve problems in the workplace. Fails to handle or carry out the work required in the job or assigned by supervisor(s). Fails to establish effective collaboration or communication with supervisor(s), other colleagues, or clients in the job. Fails to satisfy the requirements set out in the Course Description regarding working hours, written and oral report, or evaluation by supervisor(s), etc.						
Communication- intensive Course	N						
Course Type	Internship						
Course Teaching	Activities		Details		No. of Hours		
& Learning Activities	Internship v	vork	it is expected that students are t or 120 working days	to work at least 6 months	960		
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping		
	Oral preser	itation	oral presentation and in-class discussion	40	CLO 1,2,3,4		
	Written repo	ort	written report	60	CLO 1,2,3,4		
Course Website	http://moodl	e.hku.hk					
Additional Course Information	employer/di Satisfactory be recorded interested to Enrolment o	Despite no weighting for this assessment component, the completion of the employer's evaluation form by the employer/direct supervisor is required for passing the course. Satisfactory completion of this course can be counted towards the Capstone requirement. Details of internship will be recorded on the student's transcript. This course will be assessed on "Pass/Fail" basis. Students who are nterested to enrol in this course should contact the Department to obtain the approval. Enrolment of this course is not conducted via the online course selection system and should be made through the elevant Department/School office after approval has been obtained from the course coordinator.					

STAT4798	Statistics and actuarial science project (6 credits)	Academic Year	2021
Offering Department	Statistics & Actuarial Science	Quota	50
Course Co-ordinator	Prof S M S Lee, Statistics & Actuarial Science (smslee@hku.hk)		

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Teachers Involved	(Various teachers as the assessors of oral presentations and written reports, Statistics & Actuarial Science)						
Course Objectives	Each year a few projects suitable for Actuarial Science students will be offered to provide students with practica experience in approaching a real problem, in report writing and in oral presentation.						
Course Contents & Topics	These projects, under the supervision of individual staff members, involve the applications of statistics and/or probability in a wide range of problems of practical and/or academic interests.						
Course Learning		V 1	is course, students should be able to:				
Dutcomes		ormulate meaningful					
	CLO 2 le	earn and apply advar	nced techniques in probability and/or s	statistics to solve real life	problems		
	CLO 3 s	CLO 3 summarize and present research findings in a professional manner					
Pre-requisites and Co-requisites and Impermissible combinations)	Pass in at least 24 credits of advanced level disciplinary core/elective courses in BSc(Actuarial Science) programme including STAT3902 and STAT3907; and Pass or already enrolled in at least one of the following courses: STAT3911, STAT4602, STAT4904; and This capstone course is only for BSc(Actuarial Science) students; and subject to the consent of course coordinator This course is mutually exclusive with STAT4711. The earliest that a student is allowed to take this capstone course is their year 3 study.						
Offer in 2021 - 2022	Y 1st	sem 2nd sem Of	fer in 2022 - 2023 : Y	Examinatio	n No Exam		
Grade Descriptors (A+ to F)	A	original thought. Insight to quote/reference aptly organizational and prese areas relevant to the top		mation drawn from a full range propriate and insightful conclusi isiderable additional work beyo	of high quality sources and ons. Apply highly effective nd that is required in wide		
	В	B Demonstrate substantial grasp of the subject. Evidence of analytical and critical abilities and logical thinking. Critical use of relevant information from sources, showing ability to make meaningful comparisons between different secondary interpretations and to quote/reference aptly. Correct use of data of results to draw appropriate conclusions. Apply effective organizational and presentational skills.					
	С	C Demonstrate general but incomplete grasp of the subject. Evidence of some analytical and critical abilities and logical thinking. Use of relevant information from sources, showing ability to make comparisons between different interpretations and to quote/reference aptly. Mostly correct but some erroneous use of data and results to draw appropriate conclusions. Apply moderately effective organizational and presentational skills.					
	D						
	 Fail Demonstrate evidence of little or no grasp of the knowledge and understanding of the subject. Evidence of little or lack of analytical and critical abilities, logical and coherent thinking. Limited use of secondary sources and no critical comparison of them. Misuse of data and results and/or unable to draw appropriate conclusions. Organization and presentational skills are minimally effective or ineffective. 						
Communication-	N						
ntensive Course							
Course Type	Project-ba	ased course					
Course Teaching	Activities	5	Details		No. of Hours		
& Learning Activities	Reading	/ Self study			120		
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping		
	Oral pres	entation	oral presentation & in-class discussion	40	CLO 1,2,3		
	Research	n report	written report	60	CLO 1,2,3		
Course Website	http://moo	dle.hku.hk					
Additional Course	Approval	is subject to past aca	domio porformanco				

STAT4901	Risk theory	II (6 credits)	Academic Year	2021				
Offering Department	Statistics & Act	Statistics & Actuarial Science Quota						
Course Co-ordinator	TBC, Statistics	& Actuarial Science ()						
Teachers Involved								
Course Objectives		This course is an advanced course in risk theory which extends various topics discussed in STAT3906. It discusses utility theory, ruin theory, aggregate claims process, and related topics.						
Course Contents & Topics	coefficient; Lur Poisson proce	Utility theory; discrete ruin model; compound Poisson risk model; ruin probability; reinsurance; adjustment coefficient; Lundbergs inequality; Tijms approximation; non-homogeneous birth process; contagion model; mixed Poisson process; inflation model; IBNR (Incurred But Not Reported) claims; mixed Erlang distributions; stop-loss moments; equilibrium distributions.						
Course Learning	On successful	completion of this course, students should be able to:						
Outcomes		tand utility theory including some commonly used utility function lity maximization	ons, Jensens inequa	lity, risk aversion				
	CLO 2 define discrete and continuous ruin models							
	CLO 3 calculate the adjustment coefficient, Lundbergs inequality and Tijms approximation in ruin theory							
	CLO 4 understand the effect of reinsurance and change of parameters on ruin probability							
	CLO 5 understand non-homogeneous birth process and its applications as contagion models for claim frequencies							
	CLO 6 understand mixed Poisson process and its applications including the inflation model and the IBNR model							
	CLO 7 derive	the relationship between stop-loss moments and equilibrium dis	stributions					
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in STAT3	906						
Offer in 2021 - 2022	N Offer in	2022 - 2023 : N	Examination					
Grade Descriptors (A+ to F)	lean to a	nonstrate thorough mastery at an advanced level of extensive knowledge a ning outcomes. Show strong analytical and critical abilities and logical thinking pply knowledge to a wide range of complex, familiar and unfamiliar situatic ientational skills.	g, with evidence of origin	al thought, and ability				
	lear	nonstrate substantial command of a broad range of knowledge and skills req ning outcomes. Show evidence of analytical and critical abilities and logical thir some unfamiliar situations. Apply effective organizational and presentational s	nking, and ability to apply					
		nonstrate general but incomplete command of knowledge and skills require somes. Show evidence of some analytical and critical abilities and logical this						

		familiar situations A	pply moderately effective organizational and presen	tational skills		
	D	Demonstrate partial	but limited command of knowledge and skills requi	ired for attaining some of the co		
		knowledge to solve p	ome coherent and logical thinking, but with limited a problems. Apply limited or barely effective organizati	ional and presentational skills.		
	Fail	of analytical and cr	no evidence of command of knowledge and skills r itical abilities, logical and coherent thinking. Show ion and presentational skills are minimally effective	w very little or no ability to ap		
Communication- ntensive Course	N					
Course Type Course Teaching	Lecture-b Activities	ased course	Details		No. of Hours	
& Learning Activities	Lectures		Details		36	
	Tutorials				12	
	-	/ Self study			100	
Assessment Methods and Weighting	Methods	5	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping	
	Assignme	ents	Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3,4,5,6	
Required/recommended	Examinat		One 3-hour written examination & Willmot G.E.: Loss Models: From Data	75 a to Decisions (John Wile	CLO 1,2,3,4,5,6	
reading and online materials	Kaas Ŕ., e Bowers N edition). Willmot C (Springer,	edition). Kaas R., Goovaerts M., Dhaene J., & Denuit M.: Modern Actuarial Risk Theory (Springer, 2004, 1st edition). Bowers N.L., Gerber H.U., Hickman J.C. & Jones D.A.: Actuarial Mathematics (Society of Actuaries, 1997, 2				
Course Website	http://moc	odle.hku.hk				
STAT4902	Selecter	d topics in actu	arial science (6 credits)	Academic Ye	ar 2021	
Offering Department		& Actuarial Science	· · ·	Quota		
Course Co-ordinator			Actuarial Science (jefftywong@hku.hk)			
Feachers Involved			Actuarial Science)			
Course Objectives		will find useful. It fo	l course in actuarial science which discuses on tools that are in the frontier of			
Course Contents			from the following topics:			
& Topics	managem	nent with emphasis	t; Risk identification and taxonomy; Copu in insurance; Other topics as determined		; Applications to ris	
Course Learning Outcomes			f this course, students should be able to:			
Outcomes	CLO 1 understand, identify and classify different types of risks CLO 2 understand and apply copula to model risk dependence					
	CLO 3 understand and apply copula to model fisk dependence					
	CLO 4		aches for managing risks			
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in S	TAT3906				
Offer in 2021 - 2022	Y 2nd	d sem Offer in 20	22 - 2023 : N	Examination	May	
Grade Descriptors (A+ to F)	A	Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for a learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of orig to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effect presentational skills.			ginal thought, and abili	
	В	Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familia and some unfamiliar situations. Apply effective organizational and presentational skills.				
	С	outcomes. Show ev	al but incomplete command of knowledge and slidence of some analytical and critical abilities and pply moderately effective organizational and presen	logical thinking, and ability to a		
	D	Demonstrate partial Show evidence of so	but limited command of knowledge and skills requipme coherent and logical thinking, but with limited a problems. Apply limited or barely effective organization	ired for attaining some of the con nalytical and critical abilities. Sh		
	Fail	Demonstrate little or of analytical and cr	no evidence of command of knowledge and skills r itical abilities, logical and coherent thinking. Shoo ion and presentational skills are minimally effective	required for attaining the course w very little or no ability to ap		
Communication- Intensive Course	Ν					
Course Type	1	ased course				
Course Teaching	Activitie		Details		No. of Hours	
& Learning Activities	Lectures				36	
	Tutorials	/ Self study			12 100	
Assessment Methods and Weighting	Methods	•	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mappin	
	Assignme	ents	Coursework (assignments,	25	CLO 1,2,3,4	
	Examinat		tutorials and class test(s)) One 2-hour written examination	75	CLO 1,2,3,4	
Required/recommended			Anagement, Sweeting P., (Cambridge U			
eading and online materials			ident Risks, Denuit M., Dhaene J., Goova cs, Klugman S.A., Panjer H.H., Willmot G			

			general insurance (6 credits)	Academic Yea	r 2021	
Offering Department Course Co-ordinator		& Actuarial Science	Actuarial Science (benchi@hku.hk)	Quota		
eachers Involved		Benchimol, Statistics &	· · · · ·			
Course Objectives			to develop knowledge of the basic tec	hniques for ratemaking an	d estimating clai	
			e. Application of the actuarial technique			
		•	lso provides general knowledge on the	5	•	
			he fundamental concept on general in	surance actuarial science	together with th	
		g calculations.				
Course Contents		al Insurance Markets ction of general insura	in Hong Kong, Taiwan and PRC			
ropics		tions on general insur				
	. togalat	and on general mean				
		techniques for ratema				
		read and use manual				
		aking related to expos aking related to premi				
			nd loss adjustment expenses			
		te the underwriting ex	pense provisions			
		emium methods				
		tio methods differential and relativ	ition			
	•	erations when selectir				
	0. 5-4	- 41				
		ating claim liabilities quirement				
		nd analyze claim deve	elopment triangles			
		ing techniques				
			ting the claim liabilities aid claim adjustment expenses			
		e and validation of the				
	4 Applia	ations using prodictive	e modeling in General Insurance			
		0.	erprise Risk Management, etc.			
Course Learning	÷ .	-	is course, students should be able to:			
Dutcomes	CLO 1		ure and underlying risk of general insur			
	CLO 2		um rate for basic general insurance proc			
	CLO 3 Pass in S		liabilities for general insurance products	S		
Pre-requisites (and Co-requisites	rass III S	TA13900				
and Impermissible						
combinations)						
Offer in 2021 - 2022	-	sem Offer in 2022		Examination	Dec	
Grade Descriptors (A+ to F)	Α		mastery at an advanced level of extensive kno w strong analytical and critical abilities and logic			
		to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effecti				
		 presentational skills. Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course 				
	в	Demonstrate substantia	i command of a broad range of knowledge and	skills required for attaining at le	ast most of the cours	
	В	learning outcomes. Show	w evidence of analytical and critical abilities and le	ogical thinking, and ability to appl		
	B C	learning outcomes. Sho and some unfamiliar situ Demonstrate general b	w evidence of analytical and critical abilities and luations. Apply effective organizational and presen ut incomplete command of knowledge and ski	ogical thinking, and ability to appl tational skills. Ils required for attaining most o	y knowledge to famili of the course learnin	
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Feldblum, S., Personal Automobile Premiums: An Asset Share Pricing Approach for Property-Casualty Insurance, PCAS LXXXIII, 1996, pp. 190-256 (excluding Secions 7-9) Insurance Services Office, Inc., Personal Automobile Manual (Effective 6-98), General Rules 1-6 only.

STAT4904	Statistic	al learning for risk	modelling (6 credits)	Statistical learning for risk modelling (6 credits) Academic Year					
Offering Department	Statistics a	& Actuarial Science		Quota					
Course Co-ordinator			Science (stacw@hku.hk)						
Teachers Involved	(Dr C Wang, Statistics & Actuarial Science)								
Course Objectives		To make sense of the vast and complex data sets that have emerged in insurance and finance, it is essential have a firm understanding of the basic statistical modelling and prediction techniques. This course introduces so							
			basic statistical modelling and predictio ques, such as principal component an						
			The R programming language will be u						
Course Contents		Basics of statistical learning, cross-validation, linear model selection and regularization (subset selection, shrinkag							
& Topics		0	nethods), generalised linear model, tre	•					
•			ipal component analysis, naive Bayes						
		g, hierarchical clustering)							
Course Learning			course, students should be able to:						
Outcomes			wide range of predictive analytics techr						
		CLO 2 apply the techniques by using the R programming language and interpret the outputs CLO 3 recognize and compare the characteristics, strengths and weaknesses of different methods							
Pre-requisites		Pass in STAT3907 or STAT3600; and							
(and Co-requisites			d in STAT3612, or already enrolled in th	nis course: and					
and Impermissible		Actuarial Science) stude							
combinations)		,	·						
Offer in 2021 - 2022	Y 2nd	d sem Offer in 2022 - 2		Examination	May				
Grade Descriptors (A+ to F)	A	learning outcomes. Show s	stery at an advanced level of extensive knowle trong analytical and critical abilities and logical t vide range of complex, familiar and unfamiliar	hinking, with evidence of origi	inal thought, and ability				
	В	Demonstrate substantial co learning outcomes. Show e	ommand of a broad range of knowledge and sk vidence of analytical and critical abilities and logi	cal thinking, and ability to appl					
	С	Demonstrate general but i outcomes. Show evidence	ons. Apply effective organizational and presentat incomplete command of knowledge and skills of some analytical and critical abilities and logi	required for attaining most of cal thinking, and ability to ap					
	D	Demonstrate partial but lim Show evidence of some co	oderately effective organizational and presentation ited command of knowledge and skills required herent and logical thinking, but with limited analy	for attaining some of the cou tical and critical abilities. Show					
	Fail	Demonstrate little or no evid of analytical and critical a	ns. Apply limited or barely effective organizationa dence of command of knowledge and skills requ bilities, logical and coherent thinking. Show ve	ired for attaining the course le ery little or no ability to appl	arning outcomes. Lack ly knowledge to solve				
Communication-	N	problems. Organization and	presentational skills are minimally effective or in	effective.					
intensive Course	IN								
Course Type	Lecture-b	ased course							
Course Teaching	Activities		Details		No. of Hours				
& Learning Activities	Lectures				36				
	Tutorials				12				
	Reading /	/ Self study			100				
Assessment Methods and Weighting	Methods	;	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping				
	Assignme	ents	Coursework (assignments, class test(s) and computer-based project (s))	25	CLO 1,2,3				
	J		(0))						
		tion	One 2-hour written examination	75	CLO 1.2.3				
reading and	Examinat		One 2-hour written examination rning, with Applications in R, James, V	75 Vitten, Hastie, Tibshiran	CLO 1,2,3 i, 2013, New York:				
reading and online materials	Examinat An Introdu Springer								
reading and online materials Course Website	Examinat An Introdu Springer http://moo	uction to Statistical Lear odle.hku.hk	rning, with Applications in R, James, V	Vitten, Hastie, Tibshiran	i, 2013, New York:				
reading and online materials Course Website STAT7609	Examinat An Introdu Springer http://moo	uction to Statistical Lear odle.hku.hk ch methods in statis	rning, with Applications in R, James, V	Vitten, Hastie, Tibshiran Academic Yea	i, 2013, New York: r 2021				
reading and online materials Course Website STAT7609 Offering Department	Examinat An Introdu Springer http://moo Researc Statistics a	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science	rning, with Applications in R, James, V	Vitten, Hastie, Tibshiran	i, 2013, New York:				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator	Examinat An Introdu Springer http://moo Researc Statistics a Prof J J F	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science ⁻ Yao, Statistics & Actuar	rning, with Applications in R, James, V stics (6 credits) rial Science <i>(jeffyao@hku.hk)</i>	Vitten, Hastie, Tibshiran Academic Yea	i, 2013, New York: r 2021				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved	Examinat An Introdu Springer http://moo Researc Statistics of Prof J J F (Prof J J F	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science ^T Yao, Statistics & Actuar F Yao,Statistics & Actuar	rning, with Applications in R, James, V stics (6 credits) rial Science <i>(jeffyao@hku.hk)</i> rial Science)	Vitten, Hastie, Tibshiran Academic Yea Quota	i, 2013, New York: r 2021 				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved	Examinat An Introdu Springer http://moo Researc Statistics a Prof J J F (Prof J J F This cours preparing	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science ^T Yao, Statistics & Actuar F Yao, Statistics & Actuar se introduces some stat	rning, with Applications in R, James, V stics (6 credits) rial Science <i>(jeffyao@hku.hk)</i> rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on	Vitten, Hastie, Tibshiran Academic Yea Quota	i, 2013, New York: r 2021 ts will find useful in				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved Course Objectives	Examinat An Introdu Springer http://moo Researc Statistics a Prof J J F (Prof J J F This cours preparing techniques	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science ⁻ Yao, Statistics & Actuar F Yao, Statistics & Actuar se introduces some stat f for work on a resear	rning, with Applications in R, James, V stics (6 credits) rial Science <i>(jeffyao@hku.hk)</i> rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on	Vitten, Hastie, Tibshiran Academic Yea Quota	i, 2013, New York: r 2021 ts will find useful in				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents	Examinat An Introdu Springer http://moo Researc Statistics of Prof J J F This cours preparing technique: Contents I (1) Basic	uction to Statistical Lean odle.hku.hk ch methods in statis & Actuarial Science ^c Yao, Statistics & Actual F Yao, Statistics & Actual re introduces some stat j for work on a resear as and their underlying th may be selected from: a asymptotic methods: r	rning, with Applications in R, James, V stics (6 credits) rial Science <i>(jeffyao@hku.hk)</i> rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on reory.	Vitten, Hastie, Tibshiran Academic Yea Quota Detential graduate student applications of state-o lers; laws of large num	i, 2013, New York: r 2021 ts will find useful in f-the-art statistical				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents	Examinat An Introdu Springer http://moo Researc Statistics of Prof J J F (Prof J J F (Prof J J F This cours preparing techniques (1) Basic theorems;	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science F Yao, Statistics & Actuar F Yao, Statistics & Actuar ge introduces some stat of for work on a resear es and their underlying the may be selected from: asymptotic methods: r c; delta method; Edgeword	rning, with Applications in R, James, V stics (6 credits) rial Science <i>(jeffyao@hku.hk)</i> rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on teory. modes of convergence; stochastic ord rth expansions; saddlepoint approximat	Vitten, Hastie, Tibshiran Academic Yea Quota Detential graduate student applications of state-o ders; laws of large num tions.	i, 2013, New York: r 2021 ts will find useful in f-the-art statistical nbers; central limit				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents	Examinat An Introdu Springer http://moo Researc Statistics of Prof J J F (Prof J J F This cours preparing technique (1) Basic (1) Basic (2) Param	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science Yao, Statistics & Actuar F Yao, Statistics & Actuar se introduces some stat of for work on a resear as and their underlying the may be selected from: a symptotic methods: r ; delta method; Edgewon hetric and nonparametric	rning, with Applications in R, James, V stics (6 credits) rial Science (<i>jeffyao@hku.hk</i>) rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on reory. modes of convergence; stochastic orc rth expansions; saddlepoint approximat c likelihood methods: high-order approx	Vitten, Hastie, Tibshiran Academic Yea Quota Detential graduate student applications of state-o ders; laws of large num tions.	i, 2013, New York: r 2021 ts will find useful in f-the-art statistical nbers; central limit				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents	Examinat An Introdu Springer http://moo Researc Statistics a Prof J J F (Prof J J F (Prof J J F This cours preparing technique: (1) Basic theorems; (2) Param signed like	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science ^T Yao, Statistics & Actuar F Yao, Statistics & Actuar se introduces some stat of for work on a resear and their underlying the may be selected from: a symptotic methods: r ci, delta method; Edgewon netric and nonparametric elihood ratio statistics; e	rning, with Applications in R, James, V stics (6 credits) rial Science (<i>jeffyao@hku.hk</i>) rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on neory. modes of convergence; stochastic ord rth expansions; saddlepoint approximat c likelihood methods: high-order approx impirical likelihood.	Vitten, Hastie, Tibshiran Academic Yea Quota otential graduate student applications of state-o ders; laws of large num tions. dimations; profile likeliho	i, 2013, New York: r 2021 ts will find useful in f-the-art statistical nbers; central limit od and its variants;				
•	Examinat An Introdu Springer http://moo Researc Statistics a Prof J J F (Prof J J F (Prof J J F (Prof J J F This cours preparing technique Contents I (1) Basic theorems; (2) Param signed like (3) Nonparam	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science F Yao, Statistics & Actuar F Yao, Statistics & Actuar se introduces some stat of for work on a resear es and their underlying the may be selected from: asymptotic methods: r asymptotic methods: r asymptotic and nonparametric elihood ratio statistics; e parametric statistical in netric regression; density	rning, with Applications in R, James, V stics (6 credits) rial Science (<i>jeffyao@hku.hk</i>) rial Science) istical concepts and methods which po ch degree in statistics. Focus is on heory. modes of convergence; stochastic ord rth expansions; saddlepoint approximal c likelihood methods: high-order approx impirical likelihood. ference: sample quantiles; sign and y estimation; kernel methods.	Vitten, Hastie, Tibshiran Academic Yea Quota Detential graduate student applications of state-o ders; laws of large num tions. cimations; profile likeliho d rank tests; Kolmogo	i, 2013, New York: r 2021 ts will find useful in f-the-art statistical nbers; central limit od and its variants;				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents	Examinat An Introdu Springer http://moo Researc Statistics a Prof J J F (Prof J J F (Prof J J F This cours preparing technique Contents I (1) Basic theorems; (2) Param signed like (3) Nonparam (4) Compu	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science F Yao, Statistics & Actuarial Science F Yao, Statistics & Actuaria se introduces some stat f for work on a resear es and their underlying th may be selected from: asymptotic methods: r s; delta method; Edgewon netric and nonparametric telihood ratio statistics; e parametric statistical in netric regression; density utationally-intensive met	rning, with Applications in R, James, V stics (6 credits) rial Science (<i>jeffyao@hku.hk</i>) rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on heory. modes of convergence; stochastic ord rth expansions; saddlepoint approximal c likelihood methods: high-order approx impirical likelihood. ference: sample quantiles; sign and y estimation; kernel methods. thods: cross-validation; bootstrap; perm	Vitten, Hastie, Tibshiran Academic Yea Quota Detential graduate student applications of state-o ders; laws of large num tions. cimations; profile likeliho d rank tests; Kolmogo nutation methods.	i, 2013, New York: r 2021 ts will find useful in f-the-art statistical abers; central limit od and its variants; rov-Smirnov test;				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents	Examinat An Introdu Springer http://moo Researc Statistics of Prof J J F (Prof J J F (Prof J J F This cours preparing technique: Contents I (1) Basic theorems; (2) Param signed like (3) Nonpar nonparam (4) Compu (5) Robus	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science ⁵ Yao, Statistics & Actuar F Yao, Statistics & Actuar se introduces some stat j for work on a resear as and their underlying th may be selected from: asymptotic methods: r celihood ratio statistics; e barametric statistical in netric regression; density utationally-intensive met st methods: measures of	rning, with Applications in R, James, V stics (6 credits) rial Science (<i>jeffyao@hku.hk</i>) rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on the concepts and methods which po ch degree in statistics. Focus is on the spansions; saddlepoint approximate c likelihood methods: high-order approx empirical likelihood. ference: sample quantiles; sign and y estimation; kernel methods. thods: cross-validation; bootstrap; perm f robustness; M-estimator; L-estimator;	Vitten, Hastie, Tibshiran Academic Yea Quota Detential graduate student applications of state-o ders; laws of large num tions. cimations; profile likeliho d rank tests; Kolmogo nutation methods.	i, 2013, New York: r 2021 ts will find useful in f-the-art statistical abers; central limit od and its variants; rov-Smirnov test;				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents	Examinat An Introdu Springer http://moo Researc Statistics of Prof J J F (Prof J J F This cours preparing techniques (2) Param signed like (3) Nonparam (4) Compu (5) Robus (6) U-stati	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science Yao, Statistics & Actuar F Yao, Statistics & Actuar se introduces some stat of for work on a resear as and their underlying th may be selected from: a asymptotic methods: r ; delta method; Edgewon netric and nonparametric telihood ratio statistics; e parametric statistical in netric regression; density utationally-intensive met is tmethods: measures of istics, projection method	rning, with Applications in R, James, V stics (6 credits) rial Science (<i>jeffyao@hku.hk</i>) rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on reory. modes of convergence; stochastic ord rth expansions; saddlepoint approximat c likelihood methods: high-order approx empirical likelihood. ference: sample quantiles; sign and y estimation; kernel methods. thods: cross-validation; bootstrap; perm robustness; M-estimator; L-estimator; Is.	Vitten, Hastie, Tibshiran Academic Yea Quota Detential graduate student applications of state-o ders; laws of large num tions. cimations; profile likeliho d rank tests; Kolmogo nutation methods.	i, 2013, New York: r 2021 ts will find useful in f-the-art statistical abers; central limit od and its variants; rov-Smirnov test;				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents & Topics	Examinat An Introdu Springer http://moo Researc Statistics of Prof J J F (Prof J J F This cours preparing technique: Contents n (1) Basic (2) Param signed like (3) Nonp nonparamu (4) Compu (5) Robus (6) U-stati (7) Other f	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science Yao, Statistics & Actuar F Yao, Statistics & Actuar se introduces some stat of for work on a resear as and their underlying the may be selected from: a symptotic methods: r ; delta method; Edgewor netric and nonparametric telihood ratio statistics; e barametric statistical in netric regression; density utationally-intensive method istics, projection method topics as determined by	rning, with Applications in R, James, V stics (6 credits) rial Science (<i>jeffyao@hku.hk</i>) rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on teory. modes of convergence; stochastic ord rth expansions; saddlepoint approximat c likelihood methods: high-order approx empirical likelihood. ference: sample quantiles; sign and y estimation; kernel methods. thods: cross-validation; bootstrap; perm f robustness; M-estimator; L-estimator; ls.	Vitten, Hastie, Tibshiran Academic Yea Quota Detential graduate student applications of state-o ders; laws of large num tions. cimations; profile likeliho d rank tests; Kolmogo nutation methods.	i, 2013, New York: r 2021 ts will find useful in f-the-art statistical abers; central limit od and its variants; rov-Smirnov test;				
reading and online materials Course Website STAT7609 Offering Department Course Co-ordinator Teachers Involved Course Objectives Course Contents	Examinat An Introdu Springer http://moo Researc Statistics of Prof J J F (Prof J J F This cours preparing technique: Contents n (1) Basic (2) Param signed like (3) Nonp nonparamu (4) Compu (5) Robus (6) U-stati (7) Other f	uction to Statistical Lear odle.hku.hk ch methods in statis & Actuarial Science Yao, Statistics & Actuar F Yao, Statistics & Actuar se introduces some stat of for work on a resear and their underlying the may be selected from: a symptotic methods: r ; delta method; Edgewor netric and nonparametric telihood ratio statistics; e barametric tatistical in netric regression; density outationally-intensive method istics, projection method topics as determined by essful completion of this of	rning, with Applications in R, James, V stics (6 credits) rial Science (<i>jeffyao@hku.hk</i>) rial Science) tistical concepts and methods which po ch degree in statistics. Focus is on reory. modes of convergence; stochastic ord rth expansions; saddlepoint approximat c likelihood methods: high-order approx empirical likelihood. ference: sample quantiles; sign and y estimation; kernel methods. thods: cross-validation; bootstrap; perm robustness; M-estimator; L-estimator; Is.	Vitten, Hastie, Tibshiran Academic Yea Quota etential graduate student applications of state-o ders; laws of large num tions. dimations; profile likeliho d rank tests; Kolmogo nutation methods. R-estimator; estimating	i, 2013, New York: r 2021 ts will find useful in f-the-art statistical abers; central limit od and its variants; rov-Smirnov test;				

	CLO 2 understand the use of standard mathematical tools for conducting statistical research						
	CLO 3 apply a variety of research tools to solve standard statistical problems						
			me developments in contemporary st				
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in STAT3600 or STAT3907						
Offer in 2021 - 2022	Y 1st	Y1st semOffer in 2022 - 2023 : YExaminationDec					
Grade Descriptors (A+ to F)	A	learning outcomes. Show	stery at an advanced level of extensive kno strong analytical and critical abilities and logic vide range of complex, familiar and unfamili	al thinking, with evidence of ori	ginal thought, and ability		
	В	learning outcomes. Show e	ommand of a broad range of knowledge and evidence of analytical and critical abilities and ons. Apply effective organizational and preser	logical thinking, and ability to ap			
	С	outcomes. Show evidence	incomplete command of knowledge and sk of some analytical and critical abilities and oderately effective organizational and present	logical thinking, and ability to a			
	D	Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.					
	Fail Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. Lack of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.						
Communication- intensive Course	Ν						
Course Type	Lecture-b	ased course					
Course Teaching	Activities		Details		No. of Hours		
& Learning Activities	Lectures				36		
	Tutorials				12		
	Reading	/ Self study			100		
Assessment Methods and Weighting	Methods		Details	Weighting in final	Assessment		
				course grade (%)	Methods to CLO Mapping		
	Assignme	ents	Coursework (assignments, tutorials, and a class test)	course grade (%)			
			·····,		to CLO Mapping		
	Assignme Examinat Efron, B. a Owen, A.I Shao, J. (tion and Tibshirani, R.J. (19 B. (2001). Empirical Lik 1999). Mathematical St	tutorials, and a class test)	25 75 Chapman & Hall: New Y n.	to CLO Mapping CLO 1,2,3,4 CLO 1,2,3,4		

STAT7610	Advanced probability (6 credits) Academic Year 2021						
Offering Department	Statistics	Statistics & Actuarial Science Quota					
Course Co-ordinator	Prof H L Yang, Statistics & Actuarial Science (hlyang@hku.hk)						
Teachers Involved	(Prof H L Yang, Statistics & Actuarial Science)						
Course Objectives			oduction to measure theory and probability.				
	concepts in theoretical probability which are important for students to do research in actuarial science, probabilit and statistics.						
Course Contents & Topics	space, r	Contents include: sigma-algebra, measurable space, measure and probability, measure space and probability space, measurable functions, random variables, integration theory, characteristic functions, convergence of random variables, Hilbert spaces, conditional expectation, martingales.					
Course Learning	On succ	essful completion of th	his course, students should be able to:				
Outcomes	CLO 1 ι	understand the fundar	nental measure theory and probability theory				
	a	and dominated conver		convergence theorem	n, Fatou's lemma		
			ot of conditional expectation				
			y knowledge of martingale				
Pre-requisites (and Co-requisites and Impermissible combinations)	1 435 11 1	STAT3603 or STAT39					
Offer in 2021 - 2022	Y 1s	t sem Offer in 2022	- 2023 : Y	Examination	Dec		
Grade Descriptors (A+ to F)	Α	Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for attaining all the co learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and a to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effective organizational presentational skills					
		presentational skills.	a wide range of complex, familiar and unfamiliar situa	auona. Apply nighty encouv	e organizational and		
	В	presentational skills. Demonstrate substanti learning outcomes. Sho	al command of a broad range of knowledge and skills r w evidence of analytical and critical abilities and logical t	equired for attaining at leas hinking, and ability to apply	st most of the course		
	B C	presentational skills. Demonstrate substanti learning outcomes. Shh and some unfamiliar sit Demonstrate general outcomes. Show evide familiar situations. App	al command of a broad range of knowledge and skills n wevidence of analytical and critical abilities and logical uations. Apply effective organizational and presentationa out incomplete command of knowledge and skills req nce of some analytical and critical abilities and logical y moderately effective organizational and presentational	equired for attaining at leas hinking, and ability to apply I skills. uired for attaining most of thinking, and ability to appl skills.	st most of the course knowledge to familia the course learning y knowledge to most		
		presentational skills. Demonstrate substanti learning outcomes. Sho and some unfamiliar sil Demonstrate general outcomes. Show evide familiar situations. App Demonstrate partial bu Show evidence of som	al command of a broad range of knowledge and skills r ow evidence of analytical and critical abilities and logical t uations. Apply effective organizational and presentationa out incomplete command of knowledge and skills req nce of some analytical and critical abilities and logical	equired for attaining at leas hinking, and ability to apply l skills. uired for attaining most of thinking, and ability to apply skills. attaining some of the cours and critical abilities. Show	st most of the course knowledge to familiar the course learning y knowledge to most e learning outcomes.		
	C	presentational skills. Demonstrate substanti learning outcomes. Shu and some unfamiliar sil Demonstrate general outcomes. Show evide familiar situations. App Demonstrate partial bu Show evidence of som knowledge to solve pro Demonstrate little or no of analytical and critic	al command of a broad range of knowledge and skills r we vidence of analytical and critical abilities and logical t uations. Apply effective organizational and presentationa but incomplete command of knowledge and skills requince of some analytical and critical abilities and logical y moderately effective organizational and presentational t limited command of knowledge and skills required for e coherent and logical thinking, but with limited analytical	equired for attaining at leas hinking, and ability to apply I skills. Jired for attaining most of thinking, and ability to apply skills. and critical abilities. Show is d presentational skills. for attaining the course leas little or no ability to apply	st most of the course knowledge to familiar the course learning y knowledge to most e learning outcomes. limited ability to apply ming outcomes. Lack		
	C D	presentational skills. Demonstrate substanti learning outcomes. Shu and some unfamiliar sil Demonstrate general outcomes. Show evide familiar situations. App Demonstrate partial bu Show evidence of som knowledge to solve pro Demonstrate little or no of analytical and critic	al command of a broad range of knowledge and skills r ow evidence of analytical and critical abilities and logical t uations. Apply effective organizational and presentationa but incomplete command of knowledge and skills requince of some analytical and critical abilities and logical y moderately effective organizational and presentational t limited command of knowledge and skills required for e coherent and logical thinking, but with limited analytical blems. Apply limited or barely effective organizational and o evidence of command of knowledge and skills required al abilities, logical and coherent thinking. Show very	equired for attaining at leas hinking, and ability to apply I skills. Jired for attaining most of thinking, and ability to apply skills. and critical abilities. Show is d presentational skills. for attaining the course leas little or no ability to apply	st most of the course knowledge to familiar the course learning y knowledge to most e learning outcomes. limited ability to apply ming outcomes. Lack		
intensive Course	C D Fail	presentational skills. Demonstrate substanti learning outcomes. Shu and some unfamiliar sil Demonstrate general outcomes. Show evide familiar situations. App Demonstrate partial bu Show evidence of som knowledge to solve pro Demonstrate little or no of analytical and critic	al command of a broad range of knowledge and skills r ow evidence of analytical and critical abilities and logical t uations. Apply effective organizational and presentationa but incomplete command of knowledge and skills requince of some analytical and critical abilities and logical y moderately effective organizational and presentational t limited command of knowledge and skills required for e coherent and logical thinking, but with limited analytical blems. Apply limited or barely effective organizational and o evidence of command of knowledge and skills required al abilities, logical and coherent thinking. Show very	equired for attaining at leas hinking, and ability to apply I skills. Jired for attaining most of thinking, and ability to apply skills. and critical abilities. Show is d presentational skills. for attaining the course leas little or no ability to apply	st most of the course knowledge to familiar the course learning y knowledge to most e learning outcomes. limited ability to apply ming outcomes. Lack		
Communication- intensive Course Course Type Course Teaching & Learning Activities	C D Fail	presentational skills. Demonstrate substanti learning outcomes. Sh and some unfamiliar sil Demonstrate general outcomes. Show evide familiar situations. Appi Demonstrate partial bu Show evidence of som knowledge to solve pro Demonstrate little or no of analytical and critic problems. Organization	al command of a broad range of knowledge and skills r ow evidence of analytical and critical abilities and logical t uations. Apply effective organizational and presentationa but incomplete command of knowledge and skills requince of some analytical and critical abilities and logical y moderately effective organizational and presentational t limited command of knowledge and skills required for e coherent and logical thinking, but with limited analytical blems. Apply limited or barely effective organizational and o evidence of command of knowledge and skills required al abilities, logical and coherent thinking. Show very	equired for attaining at leas hinking, and ability to apply I skills. Jired for attaining most of thinking, and ability to apply skills. and critical abilities. Show is d presentational skills. for attaining the course leas little or no ability to apply	st most of the course knowledge to familiar the course learning y knowledge to most e learning outcomes. limited ability to apply ming outcomes. Lack		

	Tutorials				12		
Accordent Mathead-	-	Self study	Detaile	Matul (1. 1. 7)	100		
Assessment Methods and Weighting	Methods		Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping		
	Assignme	ents	Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3,4		
	Examinat	ion	One 2-hour written examination	75	CLO 1,2,3,4		
eading and online materials	New York, Chung K.	, 2004, 2nd edition) L.: A Course in Prob	Probability Essentials (Universitext, Spr ability Theory (Academic Press, 2001, 3	0			
Course Website	http://moo	dle.hku.hk					
STAT7611	Comput	ational statistics	(6 crodite)	Academic Ye	ar 2021		
Offering Department		& Actuarial Science	(o creatis)	Quota			
ourse Co-ordinator			al Science (gyin@hku.hk)	Quotu			
eachers Involved		n,Statistics & Actuari					
Course Objectives			ndergraduate and postgraduate stude	nts in statistics a back	ground in moder		
•	computation	onally intensive metl	hods in statistics. It emphasizes the ro	le of computation as a	fundamental tool		
	discovery	in data analysis, of s	tatistical inference, and for development	t of statistical theory and	methods.		
Course Contents A Topics	Hastings a rejection s method, e Integration	Contents include: Bayesian statistics, Markov chain Monte Carlo methods including Gibbs sampler, the Metropoli Hastings algorithm, and data augmentation; Generation of random variables including the inversion methods ejection sampling, the sampling/importance resampling method; Optimization techniques including Newton's nethod, expectation-maximization (EM) algorithm and its variants, and minorization-maximization (MM) algorithms ntegration including Laplace approximations, Gaussian quadrature, the importance sampling method; and othe					
Course Learning			models, neural networks, and Bootstrap is course, students should be able to:	methous.			
Dutcomes	CLO 1 un Ca	derstand the importa	ance of the technique for generating rar ootstrapping methods	•			
	alę	CLO 2 realize the advantages and disadvantages of the Newton-Raphson algorithm and the Fisher scoring algorithm and apply them to fit generalized linear models					
	CLO 3 understand the essence and basic principle of the EM-type algorithms and MM-type algorithms, realize their range of application, and apply them to solve practical problems CLO 4 apply EM-type algorithms to find the posterior mode and apply Markov chain Monte Carlo methods to						
	CLO 5 ap	generate posterior samples CLO 5 apply Bootstrap methods to obtain estimated standard errors of estimators and confidence intervals of parameters for both parametric and non-parametric cases					
Pre-requisites		TAT3600 or STAT39	•				
and Co-requisites and Impermissible combinations)							
Offer in 2021 - 2022	Y 1st	sem Offer in 2022		Examination	Dec		
Grade Descriptors (A+ to F)	A	learning outcomes. Sho to apply knowledge to	mastery at an advanced level of extensive know w strong analytical and critical abilities and logica a wide range of complex, familiar and unfamilia	al thinking, with evidence of original	ginal thought, and abil		
	Presentational skills. B Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.						
	C Demonstrate general but incomplete command of knowledge and skills required for attaining most of the course learning outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply moderately effective organizational and presentational skills.						
	D Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.						
	Fail	Demonstrate little or no of analytical and critica	evidence of command of knowledge and skills re al abilities, logical and coherent thinking. Show and presentational skills are minimally effective of	quired for attaining the course very little or no ability to ap			
Communication- ntensive Course	N		· · · · · · · · · · · · · · · · · · ·				
Course Type		ased course	Detaile	1			
ourse Teaching Learning Activities	Activities	5	Details		No. of Hours		
Loanning Activities	Lectures Tutorials				36 12		
		Self study					
ssessment Methods nd Weighting	Methods		Details	Weighting in final course grade (%)	100 Assessment Methods		
	Assignme	ents	Coursework (assignments, practical work, and a term test)	50	to CLO Mappir CLO 1,2,3,4,5		
	Examinat	ion	One 2-hour written examination	50	CLO 1,2,3,4,5		
Required/recommended eading and online materials	Tan, M., Computati Givens, G	Tian, G.L. and Ng, Ł ion (Chapman & Hall .H. and Hoeting, J.A.	K.W: Bayesian Missing Data Problems /CRC, Boca Raton, 2010). : Computational Statistics (Wiley, 2005) Monte Carlo Statistical Methods (Springer)				
Course Website		dle.hku.hk		,, , _ _, _ , _ _, _ _, _ _, _ , _ _, _ , _			
STAT7614	Advance	ed statistical mod	lelling (6 credits)	Academic Ye	ar 2021		
Offering Department		& Actuarial Science	·	Quota			
Course Co-ordinator	Prof G Yin	n, Statistics & Actuari	al Science (gyin@hku.hk)				
Teachers Involved		Lam, Statistics & Actu	uarial Science)				

Teachers Involved

		hung,Statistics & Actu n,Statistics & Actuaria				
Course Objectives	This course introduces modern methods for constructing and evaluating statistical models and their implementation using popular computing software, such as R or Python. It will cover both the underlying principles of each modelling approach and the model estimation procedures.					
Course Contents & Topics	Topics from: (i) Linear regression models; (ii) Generalized linear models; (iii) Model selection and regularization; (iv) Kernel and local polynomial regression; selection of smoothing parameters; (v) Generalized additive models; (vi) Hidden Markov models and Bayesian networks.					
Course Learning			is course, students should be able to:			
Outcomes			sic characteristic and rationale behind		tatistical model	
			of data the most suitable statistical mo			
	ar	nd prediction problem	v of using computing software for build ns involving binary and counting resp. Python for real data mining problems			
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in STAT3600 or STAT3907					
Offer in 2021 - 2022	Y 1st	sem 2nd sem Off	fer in 2022 - 2023 : Y	Examination	Dec May	
Grade Descriptors (A+ to F)	A Demonstrate thorough mastery at an advanced level of extensive knowledge and skills required for attaining all the course learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and ability to apply knowledge to a wide range of complex, familiar and unfamiliar situations. Apply highly effective organizational and presentational skills.					
	B Demonstrate substantial command of a broad range of knowledge and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar situations. Apply effective organizational and presentational skills.					
	C Demonstrate general but incomplete command of knowledge and skills required for attaining most of the course learning outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar situations. Apply moderately effective organizational and presentational skills.					
	D	Demonstrate partial but limited command of knowledge and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.				
	Fail Demonstrate little or no evidence of command of knowledge and skills required for attaining the course learning outcomes. Lack of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.					
Communication-	Ν					
intensive Course						
Course Type		ased course			No. of Hours	
Course Teaching	Activities	6	Details	Details		
& Learning Activities	Lectures Tutorials					
		Self study			12 100	
Assessment Methods and Weighting	Methods	•	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping	
	Assignme	ents	Coursework (assignments and class test(s))	50	CLO 1,2,3	
	Examination		One 2-hour written examination	50	CI 0 1 2 3	
	R.H. Myers et al., 2010: Generalized Linear Models (2nd ed.), Wiley W. Hardle et al., 2004: Nonparametric and Semi-parametric Models. Springer W. Zucchini & I.L. MacDonald, 2009: Hidden Markov Models for Time Series: An Introduction Using R, CRC Pres					
Required/recommended reading and online materials	R.H. Myer W. Hardle W. Zucchi	s et al., 2010: Genera et al., 2004: Nonpara ni & I.L. MacDonald,	alized Linear Models (2nd ed.), Wiley ametric and Semi-parametric Models.	Springer Series: An Introduction		

STAT7615	Advance credits)	ed quantitative risk management and finance (6	Academic Year	2021				
Offering Department	Statistics &	Statistics & Actuarial Science Quota						
Course Co-ordinator	Dr Z Zhan	g, Statistics & Actuarial Science (zhangz08@hku.hk)						
Teachers Involved	(Dr Z Zhang, Statistics & Actuarial Science)							
Course Objectives	theory to r	e covers statistical methods and models of importance to risk n narket practice via statistical modeling and decision making. Er the discrepancy between finance theory and market data.						
Course Contents & Topics	Reduction univariate	Contents include: Elementary Stochastic Calculus; Basic Monte Carlo and Quasi-Monte Carlo Methods; Variance Reduction Techniques; Simulating the value of options and the value-at-risk for risk management; Review of univariate volatility models; multivariate volatility models; Value-at-risk and expected shortfall; estimation, back-testing and stress testing; Extreme value theory for risk management.						
Course Learning	On succes	sful completion of this course, students should be able to:						
Outcomes	CLO 1 apply Monte Carlo methods to determine the value of options and other derivative securities							
	CLO 2 p	redict volatility of a set of securities using appropriate models						
	CLO 3 e	stimate the value-at-risk under extreme value theory						
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in S	FAT4608						
Offer in 2021 - 2022	Y 2nd	sem Offer in 2022 - 2023 : N	Examination	May				
Grade Descriptors (A+ to F)	A	Demonstrate thorough mastery at an advanced level of extensive knowled learning outcomes. Show strong analytical and critical abilities and logical th to apply knowledge to a wide range of complex, familiar and unfamiliar si presentational skills.	inking, with evidence of origina	al thought, and ability				
	В	Demonstrate substantial command of a broad range of knowledge and skill learning outcomes. Show evidence of analytical and critical abilities and logic and some unfamiliar situations. Apply effective organizational and presentational and presentational and presentational and presentational and presentational and presentational and presentational and presentational and and and and and and and and	al thinking, and ability to apply					
	С	Demonstrate general but incomplete command of knowledge and skills r outcomes. Show evidence of some analytical and critical abilities and logic						

	familiar situations. Apply moderately effective organizational and presentational skills. D Demonstrate partial but limited command of knowledge and skills required for attaining some of the course lear						
	Show evidence of	al but limited command of knowledge and skills requir f some coherent and logical thinking, but with limited an re problems. Apply limited or barely effective organization	alytical and critical abilities. Sh				
	of analytical and	or no evidence of command of knowledge and skills re critical abilities, logical and coherent thinking. Show zation and presentational skills are minimally effective of	very little or no ability to ap				
Communication- intensive Course	Ν						
Course Type	Lecture-based course						
Course Teaching	Activities	Details		No. of Hours			
& Learning Activities	Lectures						
	Tutorials						
	Reading / Self study						
Assessment Methods and Weighting	Methods	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping			
	Assignments	Coursework (assignments, tutorials, and a class test)	25	CLO 1,2,3			
	Examination	One 2-hour written examination	75	CLO 1,2,3			
Required/recommended reading and online materials	McLeish, Don L.: Monte Carlo Simulation & Finance. (Wiley, 2005). Glasserman, Paul: Monte Carlo Methods in Financial Engineering. (Springer, 2003). Danielsson Jon: Financial Risk Forecasting (Willy 2011) McNeil, A. J., Frey, R. & Embrechts, P.: Quantitative Risk Management (Princeton, 2005) Tsay, R.S.: Analysis of Financial Time Series (Wiley, 2010, 3rd edition)						
Course Website	http://moodle.hku.hk						

SECTION VII Degree Regulations

REGULATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ACTUARIAL SCIENCE BSc(ActuarSc)

These regulations apply to students admitted under the 4-year curriculum to the BSc in Actuarial Science degree curriculum to the first year in the academic year 2018-19 and thereafter.

(See also General Regulations and Regulations for First Degree Curricula)

Definitions

 $AS1^1$ For the purpose of these regulations and the syllabuses for the degree of BSc in Actuarial Science, unless the context otherwise requires:

"Course" means a course of study, with a credit value expressed as a number of credit-units as specified in the syllabuses for a degree curriculum.

"Syllabus" means courses taught by departments, centres, and schools, offered under a degree curriculum.

"Credits" or "credit-units" means the value assigned to each course to indicate its study load relative to the total study load under a degree curriculum. The study load refers to the hours of student learning activities and experiences, both within and outside the classroom, and includes contact hours and time spent on assessment tasks and examinations. Candidates who satisfactorily complete courses with a credit value earn the credits assigned to these courses.

Admission to the BSc in Actuarial Science degree

- AS2 To be eligible for admission to the BSc in Actuarial Science degree, candidates shall:
- (a) comply with the General Regulations;
- (b) comply with the Regulations for First Degree Curricula; and
- (c) satisfy all the requirements of the curriculum in accordance with these regulations and the syllabuses.

Period of study

AS3 The curriculum for the BSc(ActuarSc) degree shall normally require eight semesters of fulltime study, extending over not fewer than four academic years, and shall include any assessment to be held during and/or at the end of each semester. Candidates shall not in any case be permitted to extend their studies beyond the maximum period of registration of six academic years.

¹ This regulation should be read in conjunction with UG1 of the Regulations for First Degree Curricula.

Selection of courses

AS4 Candidates shall select their courses in accordance with these regulations and the guidelines specified in the syllabuses before the beginning of each semester. Any change to the selection of courses shall be made only during the add/drop period of the semester in which the course begins, and such changes shall not be reflected in the transcript of the candidate. Requests for changes after the designated add/drop period of the semester shall not be considered.

Curriculum requirements and progression in curriculum

AS5

- (a) Candidates shall satisfy the requirements prescribed in UG5 of the Regulations of First Degree Curricula.
- (b) Candidates shall take not fewer than 240 credits, in the manner specified in these regulations and the syllabuses, including 132 credits of the required courses as prescribed in the professional core of the BSc(ActuarSc) degree curriculum.
- (c) Candidates shall normally be required to take not fewer than 24 credits nor more than 30 credits in any one semester (except the summer semester) unless otherwise permitted or required by the Board of the Faculty, or except in the last semester of study when the number of outstanding credits required to complete the curriculum requirements may be fewer than 24 credits.
- (d) Candidates may, of their own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 72 credits in one academic year. With the special permission of the Board of the Faculty, candidates may exceed the annual study load of 72 credits in a given academic year provided that the total number of credits taken does not exceed the maximum curriculum study load of 288 credits for the normative period of study specified in the curriculum regulations, save as provided for under AS5(e).
- (e) Where candidates are required to make up for failed credits, the Board of the Faculty may give permission for candidates to exceed the annual study load of 72 credits provided that the total number of credits taken does not exceed the maximum curriculum study load of 432 credits for the maximum period of registration specified in the curriculum regulations.
- (f) Candidates may, with the approval of the Board of the Faculty, transfer credits for courses completed at other institutions at any time during their candidature. The number of transferred credits will be recorded on the transcript of the candidate, but the results of courses completed at other institutions shall not be included in the calculation of the GPA. The number of credits to be transferred shall not exceed half of the total credits normally required under the degree curricula of the candidates during their candidature at the University.
- (g) Candidates shall be recommended for discontinuation of their studies if they have:
 - (i) failed to complete successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where they are not required to take such a number of credits in the two given semesters, or
 - (ii) failed to achieve an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester), or
 - (iii) exceeded the maximum period of registration specified in AS3, unless otherwise permitted by the Board of the Faculty.

Advanced standing

AS6 Advanced standing may be granted to candidates in recognition of studies completed successfully before admission to the curriculum in accordance with UG2 of the Regulations for First Degree Curricula. Credits granted for advanced standing will be recorded on the transcript of the candidate but shall not be included in the calculation of the GPA.

Assessment

AS7

- (a) Candidates shall be assessed for each of the courses for which they have registered, and assessment may be conducted in any combination of continuous assessment of coursework, written examinations and/or any other assessable activities. Only passed courses will earn credits.
- (b) Candidates who are unable, because of illness, to be present at the written examination of any course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the First Semester of the following academic year. Any such application shall be made on the form prescribed within two weeks of the first day of the candidate's absence from any examination. Any supplementary examination shall be part of that academic year's examinations, and the provisions made in the regulations for failure at the first attempt shall apply accordingly.
- (c) Candidates shall not be permitted to repeat a course for which they have received a D grade or above for the purpose of upgrading.
- (d) Candidates are required to make up for failed courses in the following manner: repeating the failed course by undergoing instruction and satisfying the assessment, or for elective courses, taking another course in lieu and satisfying the assessment requirements.
- (e) There shall be no appeal against the results of examinations and other forms of assessment.

Award of BSc in Actuarial Science Degree

- AS8 To be eligible for the award of the BSc in Actuarial Science degree, candidates shall have:
- (a) satisfied the requirements in UG5 of the Regulations for First Degree Curricula;
- (b) passed not fewer than 240 credits, comprising 132 credits of the required courses as prescribed in the professional core of the BSc(ActuarSc) degree curriculum.

Honours classification

AS9

(a) Honours classifications shall be awarded in five divisions: First Class Honours, Second Class Honours Division One, Second Class Honours Division Two, Third Class Honours, and Pass. The classification of honours shall be determined by the Board of Examiners for the Degree of BSc(ActuarSc) in accordance with the following Graduation GPA scores, with all courses taken (including failed courses, but not including courses approved by the Senate graded as 'Pass', 'Fail' or 'Distinction') carrying weightings which are proportionate to their credit values²:

<u>Class of honours</u>	<u>GGPA range</u>
First Class Honours	3.60 - 4.30
Second Class Honours	(2.40 - 3.59)
Division One	3.00 - 3.59
Division Two	2.40 - 2.99
Third Class Honours	1.70 - 2.39
Pass	1.00 - 1.69

- (b) Honours classification may not be determined solely on the basis of a candidate's Graduation GPA and the Board of Examiners for the Degree of BSc(ActuarSc) may, at its absolute discretion and with justification, award a higher class of honours to a candidate deemed to have demonstrated meritorious academic achievement but whose Graduation GPA falls below the range stipulated in UG9(a) of the higher classification by not more than 0.1 Grade Point.
- (c) A list of candidates who have successfully completed all degree requirements shall be posted on Faculty noticeboards.

² For students in the 2017-18 intake and thereafter who have successfully completed six Common Core courses, the calculation of Graduation GPA is subject to the proviso that either five Common Core course with the highest grades (covering all four Areas of Inquiry), or all six courses will be counted towards Graduation GPA, depending on which generates the higher Graduation GPA.

REGULATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ACTUARIAL SCIENCE BSc(ActuarSc)

These regulations apply to students admitted under the 4-year curriculum to the BSc in Actuarial Science degree curriculum to the first year in the academic year 2017-18.

(See also General Regulations and Regulations for First Degree Curricula)

Definitions

 $AS1^1$ For the purpose of these regulations and the syllabuses for the degree of BSc in Actuarial Science, unless the context otherwise requires:

"Course" means a course of study, with a credit value expressed as a number of credit-units as specified in the syllabuses for a degree curriculum.

"Syllabus" means courses taught by departments, centres, and schools, offered under a degree curriculum.

"Credits" or "credit-units" means the value assigned to each course to indicate its study load relative to the total study load under a degree curriculum. The study load refers to the hours of student learning activities and experiences, both within and outside the classroom, and includes contact hours and time spent on assessment tasks and examinations. Candidates who satisfactorily complete courses with a credit value earn the credits assigned to these courses.

Admission to the BSc in Actuarial Science degree

- AS2 To be eligible for admission to the BSc in Actuarial Science degree, candidates shall:
- (a) comply with the General Regulations;
- (b) comply with the Regulations for First Degree Curricula; and
- (c) satisfy all the requirements of the curriculum in accordance with these regulations and the syllabuses.

Period of study

AS3 The curriculum for the BSc(ActuarSc) degree shall normally require eight semesters of fulltime study, extending over not fewer than four academic years, and shall include any assessment to be held during and/or at the end of each semester. Candidates shall not in any case be permitted to extend their studies beyond the maximum period of registration of six academic years.

¹ This regulation should be read in conjunction with UG1 of the Regulations for First Degree Curricula.

Selection of courses

AS4 Candidates shall select their courses in accordance with these regulations and the guidelines specified in the syllabuses before the beginning of each semester. Any change to the selection of courses shall be made only during the add/drop period of the semester in which the course begins, and such changes shall not be reflected in the transcript of the candidate. Requests for changes after the designated add/drop period of the semester shall not be considered.

Curriculum requirements and progression in curriculum

AS5

- (a) Candidates shall satisfy the requirements prescribed in UG5 of the Regulations of First Degree Curricula.
- (b) Candidates shall take not fewer than 240 credits, in the manner specified in these regulations and the syllabuses, including 138 credits of the required courses as prescribed in the professional core of the BSc(ActuarSc) degree curriculum.
- (c) Candidates shall normally be required to take not fewer than 24 credits nor more than 30 credits in any one semester (except the summer semester) unless otherwise permitted or required by the Board of the Faculty, or except in the last semester of study when the number of outstanding credits required to complete the curriculum requirements may be fewer than 24 credits.
- (d) Candidates may, of their own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 72 credits in one academic year. With the special permission of the Board of the Faculty, candidates may exceed the annual study load of 72 credits in a given academic year provided that the total number of credits taken does not exceed the maximum curriculum study load of 288 credits for the normative period of study specified in the curriculum regulations, save as provided for under AS5(e).
- (e) Where candidates are required to make up for failed credits, the Board of the Faculty may give permission for candidates to exceed the annual study load of 72 credits provided that the total number of credits taken does not exceed the maximum curriculum study load of 432 credits for the maximum period of registration specified in the curriculum regulations.
- (f) Candidates may, with the approval of the Board of the Faculty, transfer credits for courses completed at other institutions at any time during their candidature. The number of transferred credits will be recorded on the transcript of the candidate, but the results of courses completed at other institutions shall not be included in the calculation of the GPA. The number of credits to be transferred shall not exceed half of the total credits normally required under the degree curricula of the candidates during their candidature at the University.
- (g) Candidates shall be recommended for discontinuation of their studies if they have:
 - (i) failed to complete successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where they are not required to take such a number of credits in the two given semesters, or
 - (ii) failed to achieve an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester), or
 - (iii) exceeded the maximum period of registration specified in AS3, unless otherwise permitted by the Board of the Faculty.

Advanced standing

AS6 Advanced standing may be granted to candidates in recognition of studies completed successfully before admission to the curriculum in accordance with UG2 of the Regulations for First Degree Curricula. Credits granted for advanced standing will be recorded on the transcript of the candidate but shall not be included in the calculation of the GPA.

Assessment

AS7

- (a) Candidates shall be assessed for each of the courses for which they have registered, and assessment may be conducted in any combination of continuous assessment of coursework, written examinations and/or any other assessable activities. Only passed courses will earn credits.
- (b) Candidates who are unable, because of illness, to be present at the written examination of any course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the First Semester of the following academic year. Any such application shall be made on the form prescribed within two weeks of the first day of the candidate's absence from any examination. Any supplementary examination shall be part of that academic year's examinations, and the provisions made in the regulations for failure at the first attempt shall apply accordingly.
- (c) Candidates shall not be permitted to repeat a course for which they have received a D grade or above for the purpose of upgrading.
- (d) Candidates are required to make up for failed courses in the following manner: repeating the failed course by undergoing instruction and satisfying the assessment, or for elective courses, taking another course in lieu and satisfying the assessment requirements.
- (e) There shall be no appeal against the results of examinations and other forms of assessment.

Award of BSc in Actuarial Science Degree

- AS8 To be eligible for the award of the BSc in Actuarial Science degree, candidates shall have:
- (a) satisfied the requirements in UG5 of the Regulations for First Degree Curricula;
- (b) passed not fewer than 240 credits, comprising 138 credits of the required courses as prescribed in the professional core of the BSc(ActuarSc) degree curriculum.

Honours classification

AS9

(a) Honours classifications shall be awarded in five divisions: First Class Honours, Second Class Honours Division One, Second Class Honours Division Two, Third Class Honours, and Pass. The classification of honours shall be determined by the Board of Examiners for the Degree of BSc(ActuarSc) in accordance with the following Graduation GPA scores, with all courses taken (including failed courses, but not including courses approved by the Senate graded as 'Pass', 'Fail' or 'Distinction') carrying weightings which are proportionate to their credit values²:

<u>Class of honours</u>	<u>GGPA range</u>
First Class Honours	3.60 - 4.30
Second Class Honours	(2.40 - 3.59)
Division One	3.00 - 3.59
Division Two	2.40 - 2.99
Third Class Honours	1.70 - 2.39
Pass	1.00 - 1.69

- (b) Honours classification may not be determined solely on the basis of a candidate's Graduation GPA and the Board of Examiners for the Degree of BSc(ActuarSc) may, at its absolute discretion and with justification, award a higher class of honours to a candidate deemed to have demonstrated meritorious academic achievement but whose Graduation GPA falls below the range stipulated in UG9(a) of the higher classification by not more than 0.1 Grade Point.
- (c) A list of candidates who have successfully completed all degree requirements shall be posted on Faculty noticeboards.

² For students in the 2017-18 intake and thereafter who have successfully completed six Common Core courses, the calculation of Graduation GPA is subject to the proviso that either five Common Core course with the highest grades (covering all four Areas of Inquiry), or all six courses will be counted towards Graduation GPA, depending on which generates the higher Graduation GPA.

REGULATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ACTUARIAL SCIENCE BSc(ActuarSc)

These regulations apply to students admitted under the 4-year curriculum to the BSc in Actuarial Science degree curriculum to the first year in the academic year 2016-17.

(See also General Regulations and Regulations for First Degree Curricula)

Definitions

 $AS1^1$ For the purpose of these regulations and the syllabuses for the degree of BSc in Actuarial Science, unless the context otherwise requires:

"Course" means a course of study, with a credit value expressed as a number of credit-units as specified in the syllabuses for a degree curriculum.

"Syllabus" means courses taught by departments, centres, and schools, offered under a degree curriculum.

"Credits" or "credit-units" means the value assigned to each course to indicate its study load relative to the total study load under a degree curriculum. The study load refers to the hours of student learning activities and experiences, both within and outside the classroom, and includes contact hours and time spent on assessment tasks and examinations. Candidates who satisfactorily complete courses with a credit value earn the credits assigned to these courses.

Admission to the BSc in Actuarial Science degree

- AS2 To be eligible for admission to the BSc in Actuarial Science degree, candidates shall:
- (a) comply with the General Regulations;
- (b) comply with the Regulations for First Degree Curricula; and
- (c) satisfy all the requirements of the curriculum in accordance with these regulations and the syllabuses.

Period of study

AS3 The curriculum for the BSc(ActuarSc) degree shall normally require eight semesters of fulltime study, extending over not fewer than four academic years, and shall include any assessment to be held during and/or at the end of each semester. Candidates shall not in any case be permitted to extend their studies beyond the maximum period of registration of six academic years.

Selection of courses

AS4 Candidates shall select their courses in accordance with these regulations and the guidelines specified in the syllabuses before the beginning of each semester. Any change to the selection of courses shall be made only during the add/drop period of the semester in which the course begins, and such changes shall not be reflected in the transcript of the candidate. Requests for changes after the designated add/drop period of the semester shall not be considered.

¹ This regulation should be read in conjunction with UG1 of the Regulations for First Degree Curricula.

Curriculum requirements and progression in curriculum

AS5

- (a) Candidates shall satisfy the requirements prescribed in UG5 of the Regulations of First Degree Curricula.
- (b) Candidates shall take not fewer than 240 credits, in the manner specified in these regulations and the syllabuses, including 138 credits of the required courses as prescribed in the professional core of the BSc(ActuarSc) degree curriculum.
- (c) Candidates shall normally be required to take not fewer than 24 credits nor more than 30 credits in any one semester (except the summer semester) unless otherwise permitted or required by the Board of the Faculty, or except in the last semester of study when the number of outstanding credits required to complete the curriculum requirements may be fewer than 24 credits.
- (d) Candidates may, of their own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 72 credits in one academic year. With the special permission of the Board of the Faculty, candidates may exceed the annual study load of 72 credits in a given academic year provided that the total number of credits taken does not exceed the maximum curriculum study load of 288 credits for the normative period of study specified in the curriculum regulations, save as provided for under AS5(e).
- (e) Where candidates are required to make up for failed credits, the Board of the Faculty may give permission for candidates to exceed the annual study load of 72 credits provided that the total number of credits taken does not exceed the maximum curriculum study load of 432 credits for the maximum period of registration specified in the curriculum regulations.
- (f) Candidates may, with the approval of the Board of the Faculty, transfer credits for courses completed at other institutions at any time during their candidature. The number of transferred credits will be recorded on the transcript of the candidate, but the results of courses completed at other institutions shall not be included in the calculation of the GPA. The number of credits to be transferred shall not exceed half of the total credits normally required under the degree curricula of the candidates during their candidature at the University.
- (g) Candidates shall be recommended for discontinuation of their studies if they have:
 - (i) failed to complete successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where they are not required to take such a number of credits in the two given semesters, or
 - (ii) failed to achieve an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester), or
 - (iii) exceeded the maximum period of registration specified in AS3, unless otherwise permitted by the Board of the Faculty.

Advanced standing

AS6 Advanced standing may be granted to candidates in recognition of studies completed successfully before admission to the curriculum in accordance with UG2 of the Regulations for First Degree Curricula. Credits granted for advanced standing will be recorded on the transcript of the candidate but shall not be included in the calculation of the GPA.

(a) Candidates shall be assessed for each of the courses for which they have registered, and assessment may be conducted in any combination of continuous assessment of coursework, written examinations and/or any other assessable activities. Only passed courses will earn credits.

- (b) Candidates who are unable, because of illness, to be present at the written examination of any course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the First Semester of the following academic year. Any such application shall be made on the form prescribed within two weeks of the first day of the candidate's absence from any examination. Any supplementary examination shall be part of that academic year's examinations, and the provisions made in the regulations for failure at the first attempt shall apply accordingly.
- (c) Candidates shall not be permitted to repeat a course for which they have received a D grade or above for the purpose of upgrading.
- (d) Candidates are required to make up for failed courses in the following manner: repeating the failed course by undergoing instruction and satisfying the assessment, or for elective courses, taking another course in lieu and satisfying the assessment requirements.
- (e) There shall be no appeal against the results of examinations and other forms of assessment.

Award of BSc in Actuarial Science Degree

- AS8 To be eligible for the award of the BSc in Actuarial Science degree, candidates shall have:
- (a) satisfied the requirements in UG5 of the Regulations for First Degree Curricula;
- (b) passed not fewer than 240 credits, comprising 138 credits of the required courses as prescribed in the professional core of the BSc(ActuarSc) degree curriculum.

Honours classification

AS9

(a) Honours classifications shall be awarded in five divisions: First Class Honours, Second Class Honours Division One, Second Class Honours Division Two, Third Class Honours, and Pass. The classification of honours shall be determined by the Board of Examiners for the Degree of BSc(ActuarSc) in accordance with the following Cumulative GPA scores, with all courses taken (including failed courses, but not including courses approved by the Senate graded as 'Pass', 'Fail' or 'Distinction') carrying equal weighting:

<u>Class of honours</u>	<u>CGPA range</u>
First Class Honours	3.60 - 4.30
Second Class Honours	(2.40 - 3.59)
Division One	3.00 - 3.59
Division Two	2.40 - 2.99
Third Class Honours	1.70 - 2.39
Pass	1.00 - 1.69

AS7

- (b) Honours classification may not be determined solely on the basis of a candidate's Cumulative GPA and the Board of Examiners for the Degree of BSc(ActuarSc) may, at its absolute discretion and with justification, award a higher class of honours to a candidate deemed to have demonstrated meritorious academic achievement but whose Cumulative GPA falls below the range stipulated in UG9(a) of the higher classification by not more than 0.1 Grade Point.
- (c) A list of candidates who have successfully completed all degree requirements shall be posted on Faculty noticeboards.

REGULATIONS FOR FIRST DEGREE CURRICULA¹

Regulations for First Degree Curricula (for students admitted under the 4-year curriculum to the first year in the academic year 2019-20 and thereafter, and students admitted directly to the second year in the academic year 2020-21 and thereafter, and students admitted directly to the third year in the academic year 2021-22)

(See also General Regulations)

UG1 Definitions:

For the purpose of regulations and syllabuses for all first degree curricula unless otherwise defined —

An 'academic year' comprises two semesters, the first semester to commence in September and end in December, and the second semester to commence in January and end in May/June, on dates as prescribed by the Senate. It includes, normally at the end of each semester, a period during which candidates are assessed. For some curricula, a 'summer semester' may be organized in addition to the normal two semesters. Clinical curricula have extended semesters.

A 'summer semester' normally comprises seven to eight weeks of intensive timetabled teaching and assessment to commence four weeks after the end of the second semester assessment period, and to conclude about one week before the start of the next academic year.

The 'maximum period of registration' is equivalent to a period which is 150% of the curriculum's normative period of study as specified in the degree regulations, provided that where this results in a residual fraction of an academic year, the fractional period shall be extended to one full academic year.

'Degree curriculum' means the entire study requirements for the award of an undergraduate degree.

'Major programme' means the study requirements, including a capstone experience, for a single major area of disciplinary, interdisciplinary or multidisciplinary study, accumulating not fewer than 72 credits nor more than 96 credits, as prescribed in the syllabuses for a degree curriculum.

'Minor programme' means the study requirements for a single minor area of disciplinary, interdisciplinary or multidisciplinary study, accumulating not fewer than 36 credits nor more than 48 credits, as prescribed in the syllabuses for a degree curriculum.

'Professional core' refers to the study requirements, including a capstone experience, prescribed in the regulations and syllabuses for disciplinary studies in degree curricula which are not structured as major/minor programmes for reasons relating to professional qualification and/or accreditation.

'Course' means a course of study, with a credit value expressed as a number of credit-units as specified in the syllabuses for a degree curriculum.

'Disciplinary elective course' or 'Disciplinary Elective' means any course offered in the same major or minor programme or the professional core which can be taken by candidates to fulfill the curriculum requirements as specified in the syllabuses of the degree curriculum.

'Elective course' or 'Elective' means any course offered within the same or another curriculum, other than compulsory courses in the candidate's degree curriculum, that can be

¹ These regulations are applicable to candidates admitted from 2019-20 onwards. Reference in these regulations to the powers of the Boards of Faculties shall be applicable to Senate Boards of Studies which administer first degree curricula.

taken by the candidate in order to complete the credit requirements of the degree curriculum.

'Capstone experience' refers to one or more courses within the major programme or professional core which are approved by the Board of the Faculty for the purpose of integrating knowledge and skills acquired, and which are prescribed in the syllabuses of the degree curriculum.

'Syllabus' means courses taught by departments, centres, and schools, offered under a degree curriculum.

'Prerequisite' means a course or a group of courses which candidates must have completed successfully or a requirement which candidates must have fulfilled before being permitted to take the course in question.

'Corequisite' means a course which candidates must take in conjunction with the course in question.

'Credits' or 'credit-units' means the value assigned to each course to indicate its study load relative to the total study load under a degree curriculum. The study load refers to the hours of student learning activities and experiences, both within and outside the classroom, and includes contact hours and time spent on assessment tasks and examinations. Candidates who satisfactorily complete courses with a credit value earn the credits assigned to these courses.

'Grade Points' are standardized measurements of candidates' academic achievement in courses taken to satisfy the requirements of the degree curriculum and are expressed as a scale prescribed in these regulations.

'Grade Point Average' is a numerical measure of a candidate's academic achievement over a specified period of time. Each course attempted (including each failed course) is assigned a numerical value, with all courses carrying equal weighting. This numerical value is the product of grade points earned for the course and the credit value of that course. The 'Grade Point Average' is the sum of these numerical values divided by the total number of credits attempted:

$$GPA = \frac{\sum_{i} Course \ Grade \ Point \times Course \ Credit \ Value}{\sum_{i} Course \ Credit \ Value}$$

(where 'i' stands for all passed and failed courses taken by the student over a specified period)

'Semester Grade Point Average' or 'Semester GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) during a given semester.

'Year Grade Point Average' or 'Year GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) during a given academic year.

'Cumulative Grade Point Average' or 'Cumulative GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) at the time of calculation.

'Graduation Grade Point Average' or 'Graduation GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) at the point of graduation. For students in the 2017-18 intake and thereafter who have successfully completed six Common Core courses, the calculation of Graduation GPA is subject to the proviso that either five Common Core courses with the highest grades (covering all four Areas of Inquiry), or all six courses will be counted towards Graduation GPA, depending on which generates the higher Graduation GPA.

'Assessment' refers to judgment about the quality and extent to which a student has achieved the stated learning objectives or learning outcomes. It includes all types of assessment activities which allow for such a judgment to be made. For the purpose of interpreting the relevant provisions of the Ordinance and the Statutes and where appropriate, reference to 'examination' or 'examinations' in the Ordinance and the Statutes shall include and cover all forms of 'assessment' and its related processes.

A 'transcript' refers to a transcript of the record of study of a candidate, issued by the Registry of the University.

UG 2 Advanced standing:

Advanced standing may be granted to candidates in recognition of studies completed successfully before admission to the curriculum. Candidates who are awarded Advanced Standing will not be granted any further credit transfer for those studies for which Advanced Standing has been granted. The amount of credits to be granted for advanced standing shall be determined by the Board of the Faculty, in accordance with the following principles:

- (a) at least half the number of credits of the degree curriculum normally required for award of the degree shall be accumulated through study at this University or from transfer of credits for courses completed at other institutions in accordance with Regulation UG 4(d); and
- (b) in accordance with Statute III.5 and notwithstanding the granting of advanced and/or transfer credits, a minimum of two semesters of study at this University shall be required before a candidate is considered for the award of a first degree, other than a degree in medicine or surgery, and a minimum of four semesters of study at this University shall be required before a candidate is considered for a first degree in medicine or surgery.

Credits granted for advanced standing shall not normally be included in the calculation of the GPA unless permitted by the Board of the Faculty but will be recorded on the transcript of the candidate.

UG 3 Period of study:

The period of study of the curriculum shall be specified in the regulations governing the degree. To be eligible for award of the degree, a candidate shall fulfill all curriculum requirements within the maximum period of registration, unless otherwise permitted or required by the Board of the Faculty.

UG 4 Progression in curriculum:

- (a) Candidates shall normally be required to take not fewer than 24 credits nor more than 30 credits in any one semester (except the summer semester) unless otherwise permitted or required by the Board of the Faculty, or except in the last semester of study when the number of outstanding credits required to complete the curriculum requirements is fewer than 24 credits.
- (b) Candidates may, of their own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 72 credits in one academic year. With the special permission of the Board of the Faculty, candidates may exceed the annual study load of 72 credits in a given academic year provided that the total number of credits taken does not exceed the maximum curriculum study load for the normative period of study specified in the curriculum regulations, save as provided for under UG4(c).
- (c) Where candidates are required to make up for failed credits, the Board of the Faculty may give permission for candidates to exceed the annual study load of 72 credits provided that the total number of credits taken does not exceed the maximum curriculum study load for the maximum period of registration specified in the curriculum regulations.
- (d) Candidates may, with the approval of the Board of the Faculty, transfer credits for courses completed at other institutions at any time during their candidature. The

number of transferred credits may be recorded in the transcript of the candidate, but the results of courses completed at other institutions shall not be included in the calculation of the GPA. The number of credits to be transferred shall not exceed half of the total credits normally required under the degree curricula of the candidates during their candidature at the University.

- (e) Unless otherwise permitted by the Board of the Faculty, candidates shall be recommended for discontinuation of their studies if they have:
 - (i) failed to complete successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where they are not required to take such a number of credits in the two given semesters, or
 - (ii) failed to achieve an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester), or
 - (iii) exceeded the maximum period of registration specified in the regulations of the degree.

UG 5 Requirements for graduation:

To be eligible for admission to the degree, candidates shall fulfill the following requirements in addition to the requirements prescribed in the regulations and syllabuses governing the degree curriculum within the maximum period of registration:

- (a) successful completion of 12 credits in English language enhancement, including 6 credits in Core University English² and 6 credits in an English in the Discipline course³;
- (b) successful completion of 6 credits in Chinese language enhancement⁴;
- (c) unless otherwise prescribed in the curriculum regulations and syllabuses, successful completion of 36 credits of courses in the Common Core Curriculum, comprising at least one and not more than two courses from each Area of Inquiry⁵ with not more than 24 credits of course being selected within one academic year except where candidates are required to make up for failed credits; and
- (d) successful completion of a capstone experience as specified in the syllabuses of the degree curriculum.

UG 6 Exemption:

Candidates may be exempted, with or without special conditions attached, from any of the requirements in UG 5 by the Senate in exceptional circumstances. Candidates who are so

(c) Candidates who undertake studies in double Majors or double degrees are not required to take a second ED course but may be advised by the Faculty to do so.

² Candidates who have achieved Level 5^{**} in English Language in the Hong Kong Diploma of Secondary Education Examination, or equivalent, may at the discretion of the Faculty be exempted from this requirement and should take an elective course in lieu, see *Regulation UG6*.

³ (a) To satisfy the English in the Discipline (ED) requirement, candidates who have passed the ED course for a Major but subsequently change that Major are required to pass the ED course for the new Major, or either of the double Majors finally declared upon graduation irrespective of whether the second Major is offered within or outside of the candidates' home Faculty.

⁽b) Candidates declaring double Majors can, if they fail in the ED course for one of the Majors, either (i) re-take and successfully complete that failed ED course, or (ii) successfully complete the ED course for the other Major, irrespective of whether the Major is offered within or outside of the candidates' home Faculty.

⁴ Candidates who have not studied Chinese language during their secondary education may be exempted from this requirement and should take an elective course in lieu, see *Regulation UG6*.

⁵ Candidates registered for dual degree studies are required to successfully complete 24 credits of courses in the Common Core Curriculum, selecting one course from each Area of Inquiry, within the curriculum of the first degree, as appropriate.

exempted must replace the number of exempted credits with courses of the same credit value.

UG 7 Assessment:

- (a) Candidates shall be assessed for each of the courses for which they have registered, and assessment may be conducted in any combination of continuous assessment of coursework, written examinations and/or any other assessable activities. Only passed courses will earn credits.
- (b) Candidates who are unable, because of illness, to be present at the written examination of any course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the First Semester of the following academic year. Any such application shall be made on the form prescribed within two weeks of the first day of the candidate's absence from any examination. Any supplementary examination shall be part of that academic year's examinations, and the provisions made in the regulations for failure at the first attempt shall apply accordingly.
- (c) Candidates suspended under Statute XXXI shall not be allowed to take, present themselves for, and participate in any assessments during the period of suspension, unless otherwise permitted by the Senate.
- (d) Candidates shall not be permitted to repeat a course for which they have received a D grade or above for the purpose of upgrading.
- (e) Candidates are required to make up for failed courses in the following manner as prescribed in the curriculum regulations:
 - (i) undergoing re-assessment/re-examination in the failed course to be held no later than the end of the following semester (not including the summer semester); or
 - (ii) re-submitting failed coursework, without having to repeat the same course of instruction; or
 - (iii) repeating the failed course by undergoing instruction and satisfying the assessments; or
 - (iv) for elective courses, taking another course *in lieu* and satisfying the assessment requirements.
- (f) There shall be no appeal against the results of examinations and all other forms of assessment.

UG 8 Grading system:

(a) The grades, their standards and the grade points for assessment shall be as follows⁶:

Grade		Standard	Grade Point
A+	٦		4.3
А	}	Excellent	4.0
A-	J		3.7
B+	ו		3.3
В	}	Good	3.0
B-	J		2.7
C+	ſ		2.3
С	}	Satisfactory	2.0
C-	J	-	1.7
D+	l	Pass	1.3
D	ſ	r ass	1.0
F		Fail	0

⁶ UG 8 is not applicable to the respective Professional Core of the BDS and MBBS curricula.

(b) Special permission may be given by Senate for courses in individual curricula to be graded as 'Pass', 'Fail' or 'Distinction'. Such courses will not be included in the calculation of the GPA.

UG 9 Honours classifications:

(a) Honours classifications shall be awarded in five divisions⁷: First Class Honours, Second Class Honours Division One, Second Class Honours Division Two, Third Class Honours, and Pass. The classification of honours shall be determined by the Board of Examiners for the degree in accordance with the following Graduate GPA scores, with all courses taken (including failed courses) carrying equal weighting which are proportionate to their credit values⁸:

<u>Class of honours</u>	<u>GGPA range</u>
First Class Honours	3.60 - 4.30
Second Class Honours	(2.40 - 3.59)
Division One	3.00 - 3.59
Division Two	2.40 - 2.99
Third Class Honours	1.70 - 2.39
Pass	1.00 - 1.69

- (b) Honours classification may not be determined solely on the basis of a candidate's Graduation GPA and the Board of Examiners for the degree may, at its absolute discretion and with justification, award a higher class of honours to a candidate deemed to have demonstrated meritorious academic achievement but whose Graduation GPA falls below the range stipulated in UG9(a) of the higher classification by not more than 0.1 Grade Point.
- (c) A list of candidates who have successfully completed all degree requirements shall be posted on Faculty noticeboards.

⁷ UG 9 is not applicable to the BChinMed, BDS and MBBS curricula.

⁸ For students in the 2017-18 intake and thereafter who have successfully completed six Common Core courses, the calculation of Graduation GPA is subject to the proviso that either five Common Core course with the highest grades (covering all four Areas of Inquiry), or all six courses will be counted towards Graduation GPA, depending on which generates the higher Graduation GPA.

REGULATIONS FOR FIRST DEGREE CURRICULA

Regulations for First Degree Curricula (for students admitted under the 4-year curriculum to the first year in the academic year 2018-19, students admitted directly to the second year in the academic year 2019-20, and students admitted directly to the third year in the academic year 2020-21)

(See also General Regulations)

UG1 Definitions:

For the purpose of regulations and syllabuses for all first degree curricula unless otherwise defined —

An 'academic year' comprises two semesters, the first semester to commence in September and end in December, and the second semester to commence in January and end in May/June, on dates as prescribed by the Senate. It includes, normally at the end of each semester, a period during which candidates are assessed. For some curricula, a 'summer semester' may be organized in addition to the normal two semesters. Clinical curricula have extended semesters.

A 'summer semester' normally comprises seven to eight weeks of intensive timetabled teaching and assessment to commence four weeks after the end of the second semester assessment period, and to conclude about one week before the start of the next academic year.

The 'maximum period of registration' is equivalent to a period which is 150% of the curriculum's normative period of study as specified in the degree regulations, provided that where this results in a residual fraction of an academic year, the fractional period shall be extended to one full academic year.

'Degree curriculum' means the entire study requirements for the award of an undergraduate degree.

'Major programme' means the study requirements, including a capstone experience, for a single major area of disciplinary, interdisciplinary or multidisciplinary study, accumulating not fewer than 72 credits nor more than 96 credits, as prescribed in the syllabuses for a degree curriculum.

'Minor programme' means the study requirements for a single minor area of disciplinary, interdisciplinary or multidisciplinary study, accumulating not fewer than 36 credits nor more than 48 credits, as prescribed in the syllabuses for a degree curriculum.

'Professional core' refers to the study requirements, including a capstone experience, prescribed in the regulations and syllabuses for disciplinary studies in degree curricula which are not structured as major/minor programmes for reasons relating to professional qualification and/or accreditation.

'Course' means a course of study, with a credit value expressed as a number of credit-units as specified in the syllabuses for a degree curriculum.

'Disciplinary elective course' or 'Disciplinary Elective' means any course offered in the same major or minor programme or the professional core which can be taken by candidates to fulfill the curriculum requirements as specified in the syllabuses of the degree curriculum.

'Elective course' or 'Elective' means any course offered within the same or another

¹ These regulations are applicable to candidates admitted from 2018-19 onwards. Reference in these regulations to the powers of the Boards of Faculties shall be applicable to Senate Boards of Studies which administer first degree curricula.

curriculum, other than compulsory courses in the candidate's degree curriculum, that can be taken by the candidate in order to complete the credit requirements of the degree curriculum.

'Capstone experience' refers to one or more courses within the major programme or professional core which are approved by the Board of the Faculty for the purpose of integrating knowledge and skills acquired, and which are prescribed in the syllabuses of the degree curriculum.

'Syllabus' means courses taught by departments, centres, and schools, offered under a degree curriculum.

'Prerequisite' means a course or a group of courses which candidates must have completed successfully or a requirement which candidates must have fulfilled before being permitted to take the course in question.

'Corequisite' means a course which candidates must take in conjunction with the course in question.

'Credits' or 'credit-units' means the value assigned to each course to indicate its study load relative to the total study load under a degree curriculum. The study load refers to the hours of student learning activities and experiences, both within and outside the classroom, and includes contact hours and time spent on assessment tasks and examinations. Candidates who satisfactorily complete courses with a credit value earn the credits assigned to these courses.

'Grade Points' are standardized measurements of candidates' academic achievement in courses taken to satisfy the requirements of the degree curriculum and are expressed as a scale prescribed in these regulations.

'Grade Point Average' is a numerical measure of a candidate's academic achievement over a specified period of time. Each course attempted (including each failed course) is assigned a numerical value, with all courses carrying equal weighting. This numerical value is the product of grade points earned for the course and the credit value of that course. The 'Grade Point Average' is the sum of these numerical values divided by the total number of credits attempted:

$$GPA = \frac{\sum_{i}^{\Sigma} Course \ Grade \ Point \times Course \ Credit \ Value}{\sum_{i}^{\Sigma} Course \ Credit \ Value}$$

(where 'i' stands for all passed and failed courses taken by the student over a specified period)

'Semester Grade Point Average' or 'Semester GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) during a given semester.

'Year Grade Point Average' or 'Year GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) during a given academic year.

'Cumulative Grade Point Average' or 'Cumulative GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) at the time of calculation.

'Graduation Grade Point Average' or 'Graduation GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) at the point of graduation. For students in the 2017-18 intake and thereafter who have successfully completed six Common Core courses, the calculation of Graduation GPA is subject to the proviso that either five Common Core courses with the highest grades (covering all four Areas of Inquiry), or all six courses will be counted towards Graduation GPA, depending on which generates the higher Graduation GPA.

'Assessment' refers to judgment about the quality and extent to which a student has achieved the stated learning objectives or learning outcomes. It includes all types of assessment activities which allow for such a judgment to be made. For the purpose of interpreting the relevant provisions of the Ordinance and the Statutes and where appropriate, reference to 'examination' or 'examinations' in the Ordinance and the Statutes shall include and cover all forms of 'assessment' and its related processes.

A 'transcript' refers to a transcript of the record of study of a candidate, issued by the Registry of the University.

UG 2 Advanced standing:

Advanced standing may be granted to candidates in recognition of studies completed successfully before admission to the curriculum. Candidates who are awarded Advanced Standing will not be granted any further credit transfer for those studies for which Advanced Standing has been granted. The amount of credits to be granted for advanced standing shall be determined by the Board of the Faculty, in accordance with the following principles:

- (a) at least half the number of credits of the degree curriculum normally required for award of the degree shall be accumulated through study at this University or from transfer of credits for courses completed at other institutions in accordance with Regulation UG 4(d); and
- (b) in accordance with Statute III.5 and notwithstanding the granting of advanced and/or transfer credits, a minimum of two semesters of study at this University shall be required before a candidate is considered for the award of a first degree, other than a degree in medicine or surgery, and a minimum of four semesters of study at this University shall be required before a candidate is considered for a first degree in medicine or surgery.

Credits granted for advanced standing shall not normally be included in the calculation of the GPA unless permitted by the Board of the Faculty but will be recorded on the transcript of the candidate.

UG 3 Period of study:

The period of study of the curriculum shall be specified in the regulations governing the degree. To be eligible for award of the degree, a candidate shall fulfill all curriculum requirements within the maximum period of registration, unless otherwise permitted or required by the Board of the Faculty.

UG 4 Progression in curriculum:

- (a) Candidates shall normally be required to take not fewer than 24 credits nor more than 30 credits in any one semester (except the summer semester) unless otherwise permitted or required by the Board of the Faculty, or except in the last semester of study when the number of outstanding credits required to complete the curriculum requirements is fewer than 24 credits.
- (b) Candidates may, of their own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 72 credits in one academic year. With the special permission of the Board of the Faculty, candidates may exceed the annual study load of 72 credits in a given academic year provided that the total number of credits taken does not exceed the maximum curriculum study load for the normative period of study specified in the curriculum regulations, save as provided for under UG4(c).
- (c) Where candidates are required to make up for failed credits, the Board of the Faculty may give permission for candidates to exceed the annual study load of 72 credits provided that the total number of credits taken does not exceed the maximum curriculum study load for the maximum period of registration specified in the curriculum regulations.

- (d) Candidates may, with the approval of the Board of the Faculty, transfer credits for courses completed at other institutions at any time during their candidature. The number of transferred credits may be recorded in the transcript of the candidate, but the results of courses completed at other institutions shall not be included in the calculation of the GPA. The number of credits to be transferred shall not exceed half of the total credits normally required under the degree curricula of the candidates during their candidature at the University.
- (e) Unless otherwise permitted by the Board of the Faculty, candidates shall be recommended for discontinuation of their studies if they have:
 - (i) failed to complete successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where they are not required to take such a number of credits in the two given semesters, or
 - (ii) failed to achieve an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester), or
 - (iii) exceeded the maximum period of registration specified in the regulations of the degree.

UG 5 Requirements for graduation:

To be eligible for admission to the degree, candidates shall fulfill the following requirements in addition to the requirements prescribed in the regulations and syllabuses governing the degree curriculum within the maximum period of registration:

- (a) successful completion of 12 credits in English language enhancement, including 6 credits in Core University English² and 6 credits in an English in the Discipline course³;
- (b) successful completion of 6 credits in Chinese language enhancement⁴;
- (c) successful completion of 36 credits of courses in the Common Core Curriculum, comprising at least one and not more than two courses from each Area of Inquiry⁵ with not more than 24 credits of course being selected within one academic year except where candidates are required to make up for failed credits; and
- (d) successful completion of a capstone experience as specified in the syllabuses of the degree curriculum.

UG 6 Exemption:

Candidates may be exempted, with or without special conditions attached, from any of the

(c) Candidates who undertake studies in double Majors or double degrees are not required to take a second ED course but may be advised by the Faculty to do so.

² Candidates who have achieved Level 5^{**} in English Language in the Hong Kong Diploma of Secondary Education Examination, or equivalent, may at the discretion of the Faculty be exempted from this requirement and should take an elective course in lieu, see *Regulation UG6*.

³ (a) To satisfy the English in the Discipline (ED) requirement, candidates who have passed the ED course for a Major but subsequently change that Major are required to pass the ED course for the new Major, or either of the double Majors finally declared upon graduation irrespective of whether the second Major is offered within or outside of the candidates' home Faculty.

⁽b) Candidates declaring double Majors can, if they fail in the ED course for one of the Majors, either (i) re-take and successfully complete that failed ED course, or (ii) successfully complete the ED course for the other Major, irrespective of whether the Major is offered within or outside of the candidates' home Faculty.

⁴ Candidates who have not studied Chinese language during their secondary education may be exempted from this requirement and should take an elective course in lieu, see *Regulation UG6*.

⁵ Candidates registered for dual degree studies are required to successfully complete 24 credits of courses in the Common Core Curriculum, selecting one course from each Area of Inquiry, within the curriculum of the first degree, as appropriate.

requirements in UG 5 by the Senate in exceptional circumstances. Candidates who are so exempted must replace the number of exempted credits with courses of the same credit value.

UG 7 Assessment:

- (a) Candidates shall be assessed for each of the courses for which they have registered, and assessment may be conducted in any combination of continuous assessment of coursework, written examinations and/or any other assessable activities. Only passed courses will earn credits.
- (b) Candidates who are unable, because of illness, to be present at the written examination of any course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the First Semester of the following academic year. Any such application shall be made on the form prescribed within two weeks of the first day of the candidate's absence from any examination. Any supplementary examination shall be part of that academic year's examinations, and the provisions made in the regulations for failure at the first attempt shall apply accordingly.
- (c) Candidates suspended under Statute XXXI shall not be allowed to take, present themselves for, and participate in any assessments during the period of suspension, unless otherwise permitted by the Senate.
- (d) Candidates shall not be permitted to repeat a course for which they have received a D grade or above for the purpose of upgrading.
- (e) Candidates are required to make up for failed courses in the following manner as prescribed in the curriculum regulations:
 - (i) undergoing re-assessment/re-examination in the failed course to be held no later than the end of the following semester (not including the summer semester); or
 - (ii) re-submitting failed coursework, without having to repeat the same course of instruction; or
 - (iii) repeating the failed course by undergoing instruction and satisfying the assessments; or
 - (iv) for elective courses, taking another course *in lieu* and satisfying the assessment requirements.
- (f) There shall be no appeal against the results of examinations and all other forms of assessment.

UG 8 Grading system:

(a) The grades, their standards and the grade points for assessment shall be as follows⁶:

Grade		Standard	Grade Point
A+	٦		4.3
А	ł	Excellent	4.0
A-	J		3.7
B+	٦		3.3
В	}	Good	3.0
B-	J		2.7
C+	٦		2.3
С	}	Satisfactory	2.0
C-	J	2	1.7
D+	٦	D	1.3
D	ſ	Pass	1.0
F		Fail	0

⁶ UG 8 is not applicable to the respective Professional Core of the BDS and MBBS curricula.

(b) Special permission may be given by Senate for courses in individual curricula to be graded as 'Pass', 'Fail' or 'Distinction'. Such courses will not be included in the calculation of the GPA.

UG 9 Honours classifications:

(a) Honours classifications shall be awarded in five divisions⁷: First Class Honours, Second Class Honours Division One, Second Class Honours Division Two, Third Class Honours, and Pass. The classification of honours shall be determined by the Board of Examiners for the degree in accordance with the following Graduate GPA scores, with all courses taken (including failed courses) carrying equal weighting which are proportionate to their credit values⁸:

<u>Class of honours</u>	<u>GGPA range</u>
First Class Honours	3.60 - 4.30
Second Class Honours	(2.40 - 3.59)
Division One	3.00 - 3.59
Division Two	2.40 - 2.99
Third Class Honours	1.70 - 2.39
Pass	1.00 - 1.69

- (b) Honours classification may not be determined solely on the basis of a candidate's Graduation GPA and the Board of Examiners for the degree may, at its absolute discretion and with justification, award a higher class of honours to a candidate deemed to have demonstrated meritorious academic achievement but whose Graduation GPA falls below the range stipulated in UG9(a) of the higher classification by not more than 0.1 Grade Point.
- (c) A list of candidates who have successfully completed all degree requirements shall be posted on Faculty noticeboards.

⁷ UG 9 is not applicable to the BChinMed, BDS and MBBS curricula.

⁸ For students in the 2017-18 intake and thereafter who have successfully completed six Common Core courses, the calculation of Graduation GPA is subject to the proviso that either five Common Core course with the highest grades (covering all four Areas of Inquiry), or all six courses will be counted towards Graduation GPA, depending on which generates the higher Graduation GPA.

REGULATIONS FOR FIRST DEGREE CURRICULA

Regulations for First Degree Curricula (for students admitted under the 4-year curriculum to the first year in the academic year 2017-18, students admitted directed to the second year in the academic year 2018-19 and students admitted directly to the third year in the academic year 2019-20)

(See also General Regulations)

UG1 Definitions:

For the purpose of regulations and syllabuses for all first degree curricula unless otherwise defined —

An 'academic year' comprises two semesters, the first semester to commence in September and end in December, and the second semester to commence in January and end in May/June, on dates as prescribed by the Senate. It includes, normally at the end of each semester, a period during which candidates are assessed. For some curricula, a 'summer semester' may be organized in addition to the normal two semesters. Clinical curricula have extended semesters.

A 'summer semester' normally comprises seven to eight weeks of intensive timetabled teaching and assessment to commence four weeks after the end of the second semester assessment period, and to conclude about one week before the start of the next academic year.

The 'maximum period of registration' is equivalent to a period which is 150% of the curriculum's normative period of study as specified in the degree regulations, provided that where this results in a residual fraction of an academic year, the fractional period shall be extended to one full academic year.

'Degree curriculum' means the entire study requirements for the award of an undergraduate degree.

'Major programme' means the study requirements, including a capstone experience, for a single major area of disciplinary, interdisciplinary or multidisciplinary study, accumulating not fewer than 72 credits nor more than 96 credits, as prescribed in the syllabuses for a degree curriculum.

'Minor programme' means the study requirements for a single minor area of disciplinary, interdisciplinary or multidisciplinary study, accumulating not fewer than 36 credits nor more than 48 credits, as prescribed in the syllabuses for a degree curriculum.

'Professional core' refers to the study requirements, including a capstone experience, prescribed in the regulations and syllabuses for disciplinary studies in degree curricula which are not structured as major/minor programmes for reasons relating to professional qualification and/or accreditation.

'Course' means a course of study, with a credit value expressed as a number of credit-units as specified in the syllabuses for a degree curriculum.

'Disciplinary elective course' or 'Disciplinary Elective' means any course offered in the same major or minor programme or the professional core which can be taken by candidates to fulfill the curriculum requirements as specified in the syllabuses of the degree curriculum.

¹ These regulations are applicable to candidates admitted from 2017-18 onwards. Reference in these regulations to the powers of the Boards of Faculties shall be applicable to Senate Boards of Studies which administer first degree curricula.

'Elective course' or 'Elective' means any course offered within the same or another curriculum, other than compulsory courses in the candidate's degree curriculum, that can be taken by the candidate in order to complete the credit requirements of the degree curriculum.

'Capstone experience' refers to one or more courses within the major programme or professional core which are approved by the Board of the Faculty for the purpose of integrating knowledge and skills acquired, and which are prescribed in the syllabuses of the degree curriculum.

'Syllabus' means courses taught by departments, centres, and schools, offered under a degree curriculum.

'Prerequisite' means a course or a group of courses which candidates must have completed successfully or a requirement which candidates must have fulfilled before being permitted to take the course in question.

'Corequisite' means a course which candidates must take in conjunction with the course in question.

'Credits' or 'credit-units' means the value assigned to each course to indicate its study load relative to the total study load under a degree curriculum. The study load refers to the hours of student learning activities and experiences, both within and outside the classroom, and includes contact hours and time spent on assessment tasks and examinations. Candidates who satisfactorily complete courses with a credit value earn the credits assigned to these courses.

'Grade Points' are standardized measurements of candidates' academic achievement in courses taken to satisfy the requirements of the degree curriculum and are expressed as a scale prescribed in these regulations.

'Grade Point Average' is a numerical measure of a candidate's academic achievement over a specified period of time. Each course attempted (including each failed course) is assigned a numerical value, with all courses carrying equal weighting. This numerical value is the product of grade points earned for the course and the credit value of that course. The 'Grade Point Average' is the sum of these numerical values divided by the total number of credits attempted:

$$GPA = \frac{\sum_{i} Course \ Grade \ Point \times Course \ Credit \ Value}{\sum_{i} Course \ Credit \ Value}$$

(where 'i' stands for all passed and failed courses taken by the student over a specified period)

'Semester Grade Point Average' or 'Semester GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) during a given semester.

'Year Grade Point Average' or 'Year GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) during a given academic year.

'Cumulative Grade Point Average' or 'Cumulative GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) at the time of calculation.

'Graduation Grade Point Average' or 'Graduation GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) at the point of graduation. For students in the 2017-18 intake and thereafter who have successfully completed six Common Core courses, the calculation of Graduation GPA is subject to the proviso that either five Common Core courses with the highest grades (covering all four Areas of Inquiry), or all six courses will be counted towards Graduation GPA, depending on which generates the higher Graduation GPA.

'Assessment' refers to judgment about the quality and extent to which a student has achieved the stated learning objectives or learning outcomes. It includes all types of assessment activities which allow for such a judgment to be made. For the purpose of interpreting the relevant provisions of the Ordinance and the Statutes and where appropriate, reference to 'examination' or 'examinations' in the Ordinance and the Statutes shall include and cover all forms of 'assessment' and its related processes.

A 'transcript' refers to a transcript of the record of study of a candidate, issued by the Registry of the University.

UG 2 Advanced standing:

Advanced standing may be granted to candidates in recognition of studies completed successfully before admission to the curriculum. Candidates who are awarded Advanced Standing will not be granted any further credit transfer for those studies for which Advanced Standing has been granted. The amount of credits to be granted for advanced standing shall be determined by the Board of the Faculty, in accordance with the following principles:

- (a) at least half the number of credits of the degree curriculum normally required for award of the degree shall be accumulated through study at this University or from transfer of credits for courses completed at other institutions in accordance with Regulation UG 4(d); and
- (b) in accordance with Statute III.5 and notwithstanding the granting of advanced and/or transfer credits, a minimum of two semesters of study at this University shall be required before a candidate is considered for the award of a first degree, other than a degree in medicine or surgery, and a minimum of four semesters of study at this University shall be required before a candidate is considered for a first degree in medicine or surgery.

Credits granted for advanced standing shall not normally be included in the calculation of the GPA unless permitted by the Board of the Faculty but will be recorded on the transcript of the candidate.

UG 3 Period of study:

The period of study of the curriculum shall be specified in the regulations governing the degree. To be eligible for award of the degree, a candidate shall fulfill all curriculum requirements within the maximum period of registration, unless otherwise permitted or required by the Board of the Faculty.

UG 4 Progression in curriculum:

- (a) Candidates shall normally be required to take not fewer than 24 credits nor more than 30 credits in any one semester (except the summer semester) unless otherwise permitted or required by the Board of the Faculty, or except in the last semester of study when the number of outstanding credits required to complete the curriculum requirements is fewer than 24 credits.
- (b) Candidates may, of their own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 72 credits in one academic year. With the special permission of the Board of the Faculty, candidates may exceed the annual study load of 72 credits in a given academic year provided that the total number of credits taken does not exceed the maximum curriculum study load for the normative period of study specified in the curriculum regulations, save as provided for under UG4(c).
- (c) Where candidates are required to make up for failed credits, the Board of the Faculty may give permission for candidates to exceed the annual study load of 72 credits provided that the total number of credits taken does not exceed the maximum curriculum study load for the maximum period of registration specified in the curriculum regulations.

- (d) Candidates may, with the approval of the Board of the Faculty, transfer credits for courses completed at other institutions at any time during their candidature. The number of transferred credits may be recorded in the transcript of the candidate, but the results of courses completed at other institutions shall not be included in the calculation of the GPA. The number of credits to be transferred shall not exceed half of the total credits normally required under the degree curricula of the candidates during their candidature at the University.
- (e) Unless otherwise permitted by the Board of the Faculty, candidates shall be recommended for discontinuation of their studies if they have:
 - (i) failed to complete successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where they are not required to take such a number of credits in the two given semesters, or
 - (ii) failed to achieve an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester), or
 - (iii) exceeded the maximum period of registration specified in the regulations of the degree.

UG 5 Requirements for graduation:

To be eligible for admission to the degree, candidates shall fulfill the following requirements in addition to the requirements prescribed in the regulations and syllabuses governing the degree curriculum within the maximum period of registration:

- (a) successful completion of 12 credits in English language enhancement, including 6 credits in Core University English² and 6 credits in an English in the Discipline course³;
- (b) successful completion of 6 credits in Chinese language enhancement⁴;
- (c) successful completion of 36 credits of courses in the Common Core Curriculum, comprising at least one and not more than two courses from each Area of Inquiry⁵ with not more than 24 credits of course being selected within one academic year except where candidates are required to make up for failed credits; and
- (d) successful completion of a capstone experience as specified in the syllabuses of the degree curriculum.

UG 6 Exemption:

Candidates may be exempted, with or without special conditions attached, from any of the

(c) Candidates who undertake studies in double Majors or double degrees are not required to take a second ED course but may be advised by the Faculty to do so.

² Candidates who have achieved Level 5^{**} in English Language in the Hong Kong Diploma of Secondary Education Examination, or equivalent, may at the discretion of the Faculty be exempted from this requirement and should take an elective course in lieu, see *Regulation UG6*.

³ (a) To satisfy the English in the Discipline (ED) requirement, candidates who have passed the ED course for a Major but subsequently change that Major are required to pass the ED course for the new Major, or either of the double Majors finally declared upon graduation irrespective of whether the second Major is offered within or outside of the candidates' home Faculty.

⁽b) Candidates declaring double Majors can, if they fail in the ED course for one of the Majors, either (i) re-take and successfully complete that failed ED course, or (ii) successfully complete the ED course for the other Major, irrespective of whether the Major is offered within or outside of the candidates' home Faculty.

⁴ Candidates who have not studied Chinese language during their secondary education may be exempted from this requirement and should take an elective course in lieu, see *Regulation UG6*.

⁵ Candidates registered for dual degree studies are required to successfully complete 24 credits of courses in the Common Core Curriculum, selecting one course from each Area of Inquiry, within the curriculum of the first degree, as appropriate.

requirements in UG 5 by the Senate in exceptional circumstances. Candidates who are so exempted must replace the number of exempted credits with courses of the same credit value.

UG 7 Assessment:

- (a) Candidates shall be assessed for each of the courses for which they have registered, and assessment may be conducted in any combination of continuous assessment of coursework, written examinations and/or any other assessable activities. Only passed courses will earn credits.
- (b) Candidates who are unable, because of illness, to be present at the written examination of any course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the First Semester of the following academic year. Any such application shall be made on the form prescribed within two weeks of the first day of the candidate's absence from any examination. Any supplementary examination shall be part of that academic year's examinations, and the provisions made in the regulations for failure at the first attempt shall apply accordingly.
- (c) Candidates suspended under Statute XXXI shall not be allowed to take, present themselves for, and participate in any assessments during the period of suspension, unless otherwise permitted by the Senate.
- (d) Candidates shall not be permitted to repeat a course for which they have received a D grade or above for the purpose of upgrading.
- (e) Candidates are required to make up for failed courses in the following manner as prescribed in the curriculum regulations:
 - (i) undergoing re-assessment/re-examination in the failed course to be held no later than the end of the following semester (not including the summer semester); or
 - (ii) re-submitting failed coursework, without having to repeat the same course of instruction; or
 - (iii) repeating the failed course by undergoing instruction and satisfying the assessments; or
 - (iv) for elective courses, taking another course *in lieu* and satisfying the assessment requirements.
- (f) There shall be no appeal against the results of examinations and all other forms of assessment.

UG 8 Grading system:

(a) The grades, their standards and the grade points for assessment shall be as follows⁶:

Grade		Standard	Grade Point
A+	٦		4.3
А	ł	Excellent	4.0
A-	J		3.7
B+	٦		3.3
В	}	Good	3.0
B-	J		2.7
C+	٦		2.3
С	}	Satisfactory	2.0
C-	J	2	1.7
D+	٦	D	1.3
D	ſ	Pass	1.0
F		Fail	0

⁶ UG 8 is not applicable to the respective Professional Core of the BDS and MBBS curricula.

(b) Special permission may be given by Senate for courses in individual curricula to be graded as 'Pass', 'Fail' or 'Distinction'. Such courses will not be included in the calculation of the GPA.

UG 9 Honours classifications:

(a) Honours classifications shall be awarded in five divisions⁷: First Class Honours, Second Class Honours Division One, Second Class Honours Division Two, Third Class Honours, and Pass. The classification of honours shall be determined by the Board of Examiners for the degree in accordance with the following Graduate GPA scores, with all courses taken (including failed courses) carrying equal weighting which are proportionate to their credit values⁸:

<u>Class of honours</u>	<u>GGPA range</u>
First Class Honours	3.60 - 4.30
Second Class Honours	(2.40 - 3.59)
Division One	3.00 - 3.59
Division Two	2.40 - 2.99
Third Class Honours	1.70 - 2.39
Pass	1.00 - 1.69

- (b) Honours classification may not be determined solely on the basis of a candidate's Graduation GPA and the Board of Examiners for the degree may, at its absolute discretion and with justification, award a higher class of honours to a candidate deemed to have demonstrated meritorious academic achievement but whose Graduation GPA falls below the range stipulated in UG9(a) of the higher classification by not more than 0.1 Grade Point.
- (c) A list of candidates who have successfully completed all degree requirements shall be posted on Faculty noticeboards.

⁷ UG 9 is not applicable to the BChinMed, BDS and MBBS curricula.

⁸ For students in the 2017-18 intake and thereafter who have successfully completed six Common Core courses, the calculation of Graduation GPA is subject to the proviso that either five Common Core course with the highest grades (covering all four Areas of Inquiry), or all six courses will be counted towards Graduation GPA, depending on which generates the higher Graduation GPA.

REGULATIONS FOR FIRST DEGREE CURRICULA

Regulations for First Degree Curricula (for students admitted under the 4-year curriculum to the first year in the academic years in 2014-15, 2015-16 and 2016-17, students admitted directed to the second year in the academic year 2017-18, and students admitted directed to the third year in the academic years 2016-17, 2017-18 and 2018-19)

(See also General Regulations)

UG1 Definitions:

For the purpose of regulations and syllabuses for all first degree curricula unless otherwise defined —

An 'academic year' comprises two semesters, the first semester to commence in September and end in December, and the second semester to commence in January and end in May/June, on dates as prescribed by the Senate. It includes, normally at the end of each semester, a period during which candidates are assessed. For some curricula, a 'summer semester' may be organized in addition to the normal two semesters. Clinical curricula have extended semesters.

A 'summer semester' normally comprises seven to eight weeks of intensive timetabled teaching and assessment to commence four weeks after the end of the second semester assessment period, and to conclude about one week before the start of the next academic year.

The 'maximum period of registration' is equivalent to a period which is 150% of the curriculum's normative period of study as specified in the degree regulations, provided that where this results in a residual fraction of an academic year, the fractional period shall be extended to one full academic year.

'Degree curriculum' means the entire study requirements for the award of an undergraduate degree.

'Major programme' means the study requirements, including a capstone experience, for a single major area of disciplinary, interdisciplinary or multidisciplinary study, accumulating not fewer than 72 credits nor more than 96 credits, as prescribed in the syllabuses for a degree curriculum.

'Minor programme' means the study requirements for a single minor area of disciplinary, interdisciplinary or multidisciplinary study, accumulating not fewer than 36 credits nor more than 48 credits, as prescribed in the syllabuses for a degree curriculum.

'Professional core' refers to the study requirements, including a capstone experience, prescribed in the regulations and syllabuses for disciplinary studies in degree curricula which are not structured as major/minor programmes for reasons relating to professional qualification and/or accreditation.

¹ These regulations are applicable to candidates admitted from 2016-17 onwards to the first year of first degree curricula under the 4-year '2012 curriculum', the 2-year curriculum in respect of the BA&BEd(LangEd), BEd&BSc, BEd&BSocSc, BSc(Sp&HearSc), and BNurs, and the 6-year curriculum in respect of the BChinMed, BDS and MBBS. Reference in these regulations to the powers of the Boards of Faculties shall be applicable to Senate Boards of Studies which administer first degree curricula.

⁽The Regulations for First Degree Curricula applicable to cohorts admitted in 2012-13 and 2013-14 under the 4-year '2012 curriculum' can be found in the Calendar for 2013-14, and in the Calendar for 2014-15 for the cohorts admitted in 2014-15 and 2015-16.)

'Course' means a course of study, with a credit value expressed as a number of credit-units as specified in the syllabuses for a degree curriculum.

'Disciplinary elective course' or 'Disciplinary Elective' means any course offered in the same major or minor programme or the professional core which can be taken by candidates to fulfill the curriculum requirements as specified in the syllabuses of the degree curriculum.

'Elective course' or 'Elective' means any course offered within the same or another curriculum, other than compulsory courses in the candidate's degree curriculum, that can be taken by the candidate in order to complete the credit requirements of the degree curriculum.

'Capstone experience' refers to one or more courses within the major programme or professional core which are approved by the Board of the Faculty for the purpose of integrating knowledge and skills acquired, and which are prescribed in the syllabuses of the degree curriculum.

'Syllabus' means courses taught by departments, centres, and schools, offered under a degree curriculum.

'Prerequisite' means a course or a group of courses which candidates must have completed successfully or a requirement which candidates must have fulfilled before being permitted to take the course in question.

'Corequisite' means a course which candidates must take in conjunction with the course in question.

'Credits' or 'credit-units' means the value assigned to each course to indicate its study load relative to the total study load under a degree curriculum. The study load refers to the hours of student learning activities and experiences, both within and outside the classroom, and includes contact hours and time spent on assessment tasks and examinations. Candidates who satisfactorily complete courses with a credit value earn the credits assigned to these courses.

'Grade Points' are standardized measurements of candidates' academic achievement in courses taken to satisfy the requirements of the degree curriculum and are expressed as a scale prescribed in these regulations.

'Grade Point Average' is a numerical measure of a candidate's academic achievement over a specified period of time. Each course attempted (including each failed course) is assigned a numerical value, with all courses carrying equal weighting. This numerical value is the product of grade points earned for the course and the credit value of that course. The 'Grade Point Average' is the sum of these numerical values divided by the total number of credits attempted:

$$GPA = \frac{\sum_{i} Course \ Grade \ Point \times Course \ Credit \ Value}{\sum_{i} Course \ Credit \ Value}$$

(where 'i' stands for all passed and failed courses taken by the student over a specified period)

'Semester Grade Point Average' or 'Semester GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) during a given semester.

'Year Grade Point Average' or 'Year GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) during a given academic year.

'Cumulative Grade Point Average' or 'Cumulative GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) at the time of calculation.

'Assessment' refers to judgment about the quality and extent to which a student has achieved the stated learning objectives or learning outcomes. It includes all types of assessment activities which allow for such a judgment to be made. For the purpose of interpreting the relevant provisions of the Ordinance and the Statutes and where appropriate, reference to 'examination' or 'examinations' in the Ordinance and the Statutes shall include and cover all forms of 'assessment' and its related processes.

A 'transcript' refers to a transcript of the record of study of a candidate, issued by the Registry of the University.

UG 2 Advanced standing:

Advanced standing may be granted to candidates in recognition of studies completed successfully before admission to the curriculum. Candidates who are awarded Advanced Standing will not be granted any further credit transfer for those studies for which Advanced Standing has been granted. The amount of credits to be granted for advanced standing shall be determined by the Board of the Faculty, in accordance with the following principles:

- (a) at least half the number of credits of the degree curriculum normally required for award of the degree shall be accumulated through study at this University or from transfer of credits for courses completed at other institutions in accordance with Regulation UG 4(d); and
- (b) in accordance with Statute III.5 and notwithstanding the granting of advanced and/or transfer credits, a minimum of two semesters of study at this University shall be required before a candidate is considered for the award of a first degree, other than a degree in medicine or surgery, and a minimum of four semesters of study at this University shall be required before a candidate is considered for a first degree in medicine or surgery.

Credits granted for advanced standing shall not normally be included in the calculation of the GPA unless permitted by the Board of the Faculty but will be recorded on the transcript of the candidate.

UG 3 Period of study:

The period of study of the curriculum shall be specified in the regulations governing the degree. To be eligible for award of the degree, a candidate shall fulfill all curriculum requirements within the maximum period of registration, unless otherwise permitted or required by the Board of the Faculty.

UG 4 Progression in curriculum:

- (a) Candidates shall normally be required to take not fewer than 24 credits nor more than 30 credits in any one semester (except the summer semester) unless otherwise permitted or required by the Board of the Faculty, or except in the last semester of study when the number of outstanding credits required to complete the curriculum requirements is fewer than 24 credits.
- (b) Candidates may, of their own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 72 credits in one academic year. With the special permission of the Board of the Faculty, candidates may exceed the annual study load of 72 credits in a given academic year provided that the total number of credits taken does not exceed the maximum curriculum study load for the normative period of study specified in the curriculum regulations, save as provided for under UG4(c).
- (c) Where candidates are required to make up for failed credits, the Board of the Faculty may give permission for candidates to exceed the annual study load of 72 credits provided that the total number of credits taken does not exceed the maximum curriculum study load for the maximum period of registration specified in the curriculum regulations.
- (d) Candidates may, with the approval of the Board of the Faculty, transfer credits for courses completed at other institutions at any time during their candidature. The

number of transferred credits may be recorded in the transcript of the candidate, but the results of courses completed at other institutions shall not be included in the calculation of the GPA. The number of credits to be transferred shall not exceed half of the total credits normally required under the degree curricula of the candidates during their candidature at the University.

- (e) Unless otherwise permitted by the Board of the Faculty, candidates shall be recommended for discontinuation of their studies if they have:
 - (i) failed to complete successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where they are not required to take such a number of credits in the two given semesters, or
 - (ii) failed to achieve an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester), or
 - (iii) exceeded the maximum period of registration specified in the regulations of the degree.

UG 5 Requirements for graduation:

To be eligible for admission to the degree, candidates shall fulfill the following requirements in addition to the requirements prescribed in the regulations and syllabuses governing the degree curriculum within the maximum period of registration:

- (a) successful completion of 12 credits in English language enhancement, including 6 credits in Core University English² and 6 credits in an English in the Discipline course³;
- (b) successful completion of 6 credits in Chinese language enhancement⁴;
- (c) successful completion of 36 credits of courses in the Common Core Curriculum, comprising at least one and not more than two courses from each Area of Inquiry⁵ with not more than 24 credits of course being selected within one academic year except where candidates are required to make up for failed credits; and
- (d) successful completion of a capstone experience as specified in the syllabuses of the degree curriculum.

UG 6 Exemption:

Candidates may be exempted, with or without special conditions attached, from any of the

- ³ (a) To satisfy the English in the Discipline (ED) requirement, candidates who have passed the ED course for a Major but subsequently change that Major are required to pass the ED course for the new Major, or either of the double Majors finally declared upon graduation irrespective of whether the second Major is offered within or outside of the candidates' home Faculty.
 - (b) Candidates declaring double Majors can, if they fail in the ED course for one of the Majors, either (i) re-take and successfully complete that failed ED course, or (ii) successfully complete the ED course for the other Major, irrespective of whether the Major is offered within or outside of the candidates' home Faculty.
- (c) Candidates who undertake studies in double Majors or double degrees are not required to take a second ED course but may be advised by the Faculty to do so.

⁴ Candidates who have not studied Chinese language during their secondary education may be exempted from this requirement and should take an elective course in lieu, see *Regulation UG6*.

⁵ Candidates registered for double degree studies are required to successfully complete 24 credits of courses in the Common Core Curriculum, selecting one course from each Area of Inquiry, within the curriculum of the first degree, as appropriate.

² Candidates who have achieved Level 5^{**} in English Language in the Hong Kong Diploma of Secondary Education Examination, or equivalent, may at the discretion of the Faculty be exempted from this requirement and should take an elective course in lieu, see *Regulation UG6*.

requirements in UG 5 by the Senate in exceptional circumstances. Candidates who are so exempted must replace the number of exempted credits with courses of the same credit value.

UG 7 Assessment:

- (a) Candidates shall be assessed for each of the courses for which they have registered, and assessment may be conducted in any combination of continuous assessment of coursework, written examinations and/or any other assessable activities. Only passed courses will earn credits.
- (b) Candidates who are unable, because of illness, to be present at the written examination of any course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the First Semester of the following academic year. Any such application shall be made on the form prescribed within two weeks of the first day of the candidate's absence from any examination. Any supplementary examination shall be part of that academic year's examinations, and the provisions made in the regulations for failure at the first attempt shall apply accordingly.
- (c) Candidates suspended under Statute XXXI shall not be allowed to take, present themselves for, and participate in any assessments during the period of suspension, unless otherwise permitted by the Senate.
- (d) Candidates shall not be permitted to repeat a course for which they have received a D grade or above for the purpose of upgrading.
- (e) Candidates are required to make up for failed courses in the following manner as prescribed in the curriculum regulations:
 - (i) undergoing re-assessment/re-examination in the failed course to be held no later than the end of the following semester (not including the summer semester); or
 - (ii) re-submitting failed coursework, without having to repeat the same course of instruction; or
 - (iii) repeating the failed course by undergoing instruction and satisfying the assessments; or
 - (iv) for elective courses, taking another course *in lieu* and satisfying the assessment requirements.
- (f) There shall be no appeal against the results of examinations and all other forms of assessment.

UG 8 Grading system:

(a) The grades, their standards and the grade points for assessment shall be as follows⁶:

Grade		Standard	Grade Point
A+	٦		4.3
А	}	Excellent	4.0
A-	J		3.7
B+	ſ		3.3
В	}	Good	3.0
B-	J		2.7
C+	٦		2.3
С	}	Satisfactory	2.0
C-	J	-	1.7
D+	l	Pass	1.3
D	ſ	rass	1.0
F		Fail	0

⁶ UG 8 is not applicable to the respective Professional Core of the BDS and MBBS curricula.

(b) Special permission may be given by Senate for courses in individual curricula to be graded as 'Pass', 'Fail' or 'Distinction'. Such courses will not be included in the calculation of the GPA.

UG 9 Honours classifications:

(a) Honours classifications shall be awarded in five divisions⁷: First Class Honours, Second Class Honours Division One, Second Class Honours Division Two, Third Class Honours, and Pass. The classification of honours shall be determined by the Board of Examiners for the degree in accordance with the following Cumulative GPA scores, with all courses taken (including failed courses) carrying equal weighting:

<u>Class of honours</u>	<u>CGPA range</u>
First Class Honours	3.60 - 4.30
Second Class Honours	(2.40 - 3.59)
Division One	3.00 - 3.59
Division Two	2.40 - 2.99
Third Class Honours	1.70 - 2.39
Pass	1.00 - 1.69

- (b) Honours classification may not be determined solely on the basis of a candidate's Cumulative GPA and the Board of Examiners for the degree may, at its absolute discretion and with justification, award a higher class of honours to a candidate deemed to have demonstrated meritorious academic achievement but whose Cumulative GPA falls below the range stipulated in UG9(a) of the higher classification by not more than 0.1 Grade Point.
- (c) A list of candidates who have successfully completed all degree requirements shall be posted on Faculty noticeboards.

⁷ UG 9 is not applicable to the BChinMed, BDS and MBBS curricula.

REGULATIONS FOR FIRST DEGREE CURRICULA

Regulations for First Degree Curricula (for students admitted under the 4-year curriculum to the first year in the academic year 2013-14, and students admitted directly to the third year in 2015-16)

(See also General Regulations)

UG 1 Definitions:

For the purpose of regulations and syllabuses for all first degree curricula unless otherwise defined —

An 'academic year' comprises two semesters, the first semester to commence in September and end in December, and the second semester to commence in January and end in May/June, on dates as prescribed by the Senate. It includes, normally at the end of each semester, a period during which candidates are assessed. For some curricula, a 'summer semester' may be organized in addition to the normal two semesters. Clinical curricula have extended semesters.

A 'summer semester' normally comprises seven to eight weeks of intensive timetabled teaching and assessment to commence four weeks after the end of the second semester assessment period, and to conclude about one week before the start of the next academic year.

The 'maximum period of registration' is equivalent to a period which is 150% of the curriculum's normative period of study as specified in the degree regulations, provided that where this results in a residual fraction of an academic year, the fractional period shall be extended to one full academic year.

'Degree curriculum' means the entire study requirements for the award of an undergraduate degree.

'Major programme' means the study requirements, including a capstone experience, for a single major area of disciplinary, interdisciplinary or multidisciplinary study, accumulating not fewer than 72 credits nor more than 96 credits, as prescribed in the syllabuses for a degree curriculum.

'Minor programme' means the study requirements for a single minor area of disciplinary, interdisciplinary or multidisciplinary study, accumulating not fewer than 36 credits nor more than 48 credits, as prescribed in the syllabuses for a degree curriculum.

'Professional core' refers to the study requirements, including a capstone experience, prescribed in the regulations and syllabuses for disciplinary studies in degree curricula which are not structured as major/minor programmes for reasons relating to professional qualification and/or accreditation.

'Course' means a course of study, with a credit value expressed as a number of credit-units

¹ These regulations are applicable to candidates admitted from 2016-17 onwards to the first year of first degree curricula under the 4-year '2012 curriculum', the 2-year curriculum in respect of the BA&BEd(LangEd), BEd&BSc, BEd&BSocSc, BSc(Sp&HearSc), and BNurs, and the 6-year curriculum in respect of the BChinMed, BDS and MBBS. Reference in these regulations to the powers of the Boards of Faculties shall be applicable to Senate Boards of Studies which administer first degree curricula.

⁽The Regulations for First Degree Curricula applicable to cohorts admitted in 2012-13 and 2013-14 under the 4-year '2012 curriculum' can be found in the Calendar for 2013-14, and in the Calendar for 2014-15 for the cohorts admitted in 2014-15 and 2015-16.)

as specified in the syllabuses for a degree curriculum.

'Disciplinary elective course' or 'Disciplinary Elective' means any course offered in the same major or minor programme or the professional core which can be taken by candidates to fulfill the curriculum requirements as specified in the syllabuses of the degree curriculum.

'Elective course' or 'Elective' means any course offered within the same or another curriculum, other than compulsory courses in the candidate's degree curriculum, that can be taken by the candidate in order to complete the credit requirements of the degree curriculum.

'Capstone experience' refers to one or more courses within the major programme or professional core which are approved by the Board of the Faculty for the purpose of integrating knowledge and skills acquired, and which are prescribed in the syllabuses of the degree curriculum.

'Syllabus' means courses taught by departments, centres, and schools, offered under a degree curriculum.

'Prerequisite' means a course or a group of courses which candidates must have completed successfully or a requirement which candidates must have fulfilled before being permitted to take the course in question.

'Corequisite' means a course which candidates must take in conjunction with the course in question.

'Credits' or 'credit-units' means the value assigned to each course to indicate its study load relative to the total study load under a degree curriculum. The study load refers to the hours of student learning activities and experiences, both within and outside the classroom, and includes contact hours and time spent on assessment tasks and examinations. Candidates who satisfactorily complete courses with a credit value earn the credits assigned to these courses.

'Grade Points' are standardized measurements of candidates' academic achievement in courses taken to satisfy the requirements of the degree curriculum and are expressed as a scale prescribed in these regulations.

'Grade Point Average' is a numerical measure of a candidate's academic achievement over a specified period of time. Each course attempted (including each failed course) is assigned a numerical value, with all courses carrying equal weighting. This numerical value is the product of grade points earned for the course and the credit value of that course. The 'Grade Point Average' is the sum of these numerical values divided by the total number of credits attempted:

$$GPA = \frac{\sum_{i} Course \ Grade \ Point \times Course \ Credit \ Value}{\sum_{i} Course \ Credit \ Value}$$
(where 'i' stands for all passed and foiled sources taken by

(where 'i' stands for all passed and failed courses taken by the student over a specified period)

'Semester Grade Point Average' or 'Semester GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) during a given semester.

'Year Grade Point Average' or 'Year GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) during a given academic year.

'Cumulative Grade Point Average' or 'Cumulative GPA' is the GPA in respect of courses attempted by a candidate (including failed courses) at the time of calculation.

'Assessment' refers to judgment about the quality and extent to which a student has achieved the stated learning objectives or learning outcomes. It includes all types of assessment activities which allow for such a judgment to be made. For the purpose of interpreting the relevant provisions of the Ordinance and the Statutes and where appropriate, reference to 'examination' or 'examinations' in the Ordinance and the Statutes shall include and cover all forms of 'assessment' and its related processes.

A 'transcript' refers to a transcript of the record of study of a candidate, issued by the Registry of the University.

UG 2 Advanced standing:

Advanced standing may be granted to candidates in recognition of studies completed successfully in an approved institution of higher education elsewhere. Candidates who are awarded Advanced Standing will not be granted any further credit transfer for those studies for which Advanced Standing has been granted. The amount of credits to be granted for advanced standing shall be determined by the Board of the Faculty, in accordance with the following principles:

- (a) at least half the number of credits of the degree curriculum normally required for award of the degree shall be accumulated through study at this University or from transfer of credits for courses completed at other institutions in accordance with Regulation UG 4(d); and
- (b) in accordance with Statute III.5 and notwithstanding the granting of advanced and/or transfer credits, a minimum of two semesters of study at this University shall be required before a candidate is considered for the award of a first degree, other than a degree in medicine or surgery, and a minimum of four semesters of study at this University shall be required before a candidate is considered for a first degree in medicine or surgery.

Credits granted for advanced standing shall not normally be included in the calculation of the GPA unless permitted by the Board of the Faculty but will be recorded on the transcript of the candidate.

UG 3 Period of study:

The period of study of the curriculum shall be specified in the regulations governing the degree. To be eligible for award of the degree, a candidate shall fulfill all curriculum requirements within the maximum period of registration, unless otherwise permitted or required by the Board of the Faculty.

UG 4 Progression in curriculum:

- (a) Candidates shall normally be required to take not fewer than 24 credits nor more than 30 credits in any one semester (except the summer semester) unless otherwise permitted or required by the Board of the Faculty, or except in the last semester of study when the number of outstanding credits required to complete the curriculum requirements is fewer than 24 credits.
- (b) Candidates may, of their own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 72 credits in one academic year. With the special permission of the Board of the Faculty, candidates may exceed the annual study load of 72 credits in a given academic year provided that the total number of credits taken does not exceed the maximum curriculum study load for the normative period of study specified in the curriculum regulations, save as provided for under UG4(c).
- (c) Where candidates are required to make up for failed credits, the Board of the Faculty may give permission for candidates to exceed the annual study load of 72 credits provided that the total number of credits taken does not exceed the maximum curriculum study load for the maximum period of registration specified in the curriculum regulations.
- (d) Candidates may, with the approval of the Board of the Faculty, transfer credits for courses completed at other institutions at any time during their candidature. The

number of transferred credits may be recorded in the transcript of the candidate, but the results of courses completed at other institutions shall not be included in the calculation of the GPA. The number of credits to be transferred shall not exceed half of the total credits normally required under the degree curricula of the candidates during their candidature at the University.

- (e) Unless otherwise permitted by the Board of the Faculty, candidates shall be recommended for discontinuation of their studies if they have:
 - (i) failed to complete successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where they are not required to take such a number of credits in the two given semesters, or
 - (ii) failed to achieve an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester), or
 - (iii) exceeded the maximum period of registration specified in the regulations of the degree.

UG 5 Requirements for graduation:

To be eligible for admission to the degree, candidates shall fulfill the following requirements in addition to the requirements prescribed in the regulations and syllabuses governing the degree curriculum within the maximum period of registration:

- (a) successful completion of 12 credits in English language enhancement, including 6 credits in Core University English² and 6 credits in an English in the Discipline course³;
- (b) successful completion of 6 credits in Chinese language enhancement⁴;
- (c) successful completion of 36 credits of courses in the Common Core Curriculum, comprising at least one and not more than two courses from each Area of Inquiry⁵ with not more than 24 credits of courses being selected within one academic year except where candidates are required to make up for failed credits; and
- (d) successful completion of a capstone experience as specified in the syllabuses of the degree curriculum.

UG 6 Exemption:

² Candidates who have achieved Level 5^{**} in English Language in the Hong Kong Diploma of Secondary Education Examination, or equivalent, may at the discretion of the Faculty be exempted from this requirement and should take an elective course in lieu, see *Regulation UG6*.

- ³ (a) To satisfy the English in the Discipline (ED) requirement, candidates who have passed the ED course for a Major but subsequently change that Major are required to pass the ED course for the new Major, or either of the double Majors finally declared upon graduation irrespective of whether the second Major is offered within or outside of the candidates' home Faculty.
 - (b) Candidates declaring double Majors can, if they fail in the ED course for one of the Majors, either (i) re-take and successfully complete that failed ED course, or (ii) successfully complete the ED course for the other Major, irrespective of whether the Major is offered within or outside of the candidates' home Faculty.
- (c) Candidates who undertake studies in double Majors or double degrees are not required to take a second ED course but may be advised by the Faculty to do so.

⁴ Candidates who have not studied Chinese language during their secondary education may be exempted from this requirement and should take an elective course in lieu, see *Regulation UG6*.

⁵ Candidates registered for double degree studies are required to successfully complete 24 credits of courses in the Common Core Curriculum, selecting one course from each Area of Inquiry, within the curriculum of the first degree, as appropriate.

Candidates may be exempted, with or without special conditions attached, from any of the requirements in UG 5 by the Senate in exceptional circumstances. Candidates who are so exempted must replace the number of exempted credits with courses of the same credit value.

UG 7 Assessment:

- (a) Candidates shall be assessed for each of the courses for which they have registered, and assessment may be conducted in any combination of continuous assessment of coursework, written examinations and/or any other assessable activities. Only passed courses will earn credits.
- (b) Candidates who are unable, because of illness, to be present at the written examination of any course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the First Semester of the following academic year. Any such application shall be made on the form prescribed within two weeks of the first day of the candidate's absence from any examination. Any supplementary examination shall be part of that academic year's examinations, and the provisions made in the regulations for failure at the first attempt shall apply accordingly.
- (c) Candidates shall not be permitted to repeat a course for which they have received a D grade or above for the purpose of upgrading.
- (d) Candidates are required to make up for failed courses in the following manner as prescribed in the curriculum regulations:
 - (i) undergoing re-assessment/re-examination in the failed course to be held no later than the end of the following semester (not including the summer semester); or
 - (ii) re-submitting failed coursework, without having to repeat the same course of instruction; or
 - (iii) repeating the failed course by undergoing instruction and satisfying the assessments; or
 - (iv) for elective courses, taking another course *in lieu* and satisfying the assessment requirements.
- (e) There shall be no appeal against the results of examinations and all other forms of assessment.

UG 8 Grading system:

(a) The grades, their standards and the grade points for assessment shall be as follows⁶:

Grade		Standard	Grade Point
A+	ו		4.3
А	}	Excellent	4.0
A-	J		3.7
B+	ſ		3.3
В	}	Good	3.0
B-	J		2.7
C+	٦		2.3
С	}	Satisfactory	2.0
C-	J	•	1.7
D+	l	Pass	1.3
D	ſ	1 488	1.0
F		Fail	0

(b) Special permission may be given by Senate for courses in individual curricula to be

⁶ UG 8 is not applicable to the respective Professional Core of the BDS and MBBS curricula.

graded as 'Pass', 'Fail' or 'Distinction'. Such courses will not be included in the calculation of the GPA.

UG 9 Honours classifications:

(a) Honours classifications shall be awarded in five divisions⁷: First Class Honours, Second Class Honours Division One, Second Class Honours Division Two, Third Class Honours, and Pass. The classification of honours shall be determined by the Board of Examiners for the degree in accordance with the following Cumulative GPA scores, with all courses taken (including failed courses) carrying equal weighting:

<u>Class of honours</u>	<u>CGPA range</u>
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Third Class Honours	1.70 - 2.39
Pass	1.00 - 1.69

- (b) Honours classification may not be determined solely on the basis of a candidate's Cumulative GPA and the Board of Examiners for the degree may, at its absolute discretion and with justification, award a higher class of honours to a candidate deemed to have demonstrated meritorious academic achievement but whose Cumulative GPA falls below the range stipulated in UG9(a) of the higher classification by not more than 0.1 Grade Point.
- (c) A list of candidates who have successfully completed all degree requirements shall be posted on Faculty noticeboards.

⁷ UG 9 is not applicable to the BChinMed, BDS and MBBS curricula.

Teaching Weeks SECTION VIII

Teaching Weeks 2021-22 for Undergraduate and Taught Postgraduate Students

	SUN	MON	TUE	WED	THUR	FRI	SAT	FIRST SEMESTER: SEP 1 - DEC 23, 2021	Week
SEP-21	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 [22] 29	2 9 16 23 30	3 10 17 24	4 11 18 25	First Day of Teaching: Sep 1, 2021	1 2 3 4 5
OCT-21	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	7 [14] 21 28	[1] 8 15 22 29	2 9 16 23 30	Reading/ Field Trip Week: Oct 11 - 16, 2021	6 7(Reading) 8 9
NOV-21	7 14 21 28	1 8 15 22 29	2 9 16 23 30	3 10 17 24	4 11 18 25	5 12 19 26	6 13 20 27	Last Day of Teaching: Nov 30, 2021	10 11 12 13
DEC-21	5 12 19 26	6 13 20 [27]	7 14 21 28	1 8 15 22 29	2 9 16 23 30	3 10 17 (24) <31>	4 11 18 [25]	Revision Period: Dec 1 - 7, 2021 Assessment Period: Dec 8 - 23, 2021	14(Revision) 1 2 3 Break
JAN-22	2 9 16 23	3 10 17 24	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	[1] 8 15 22 29	SECOND SEMESTER: JAN 17 - MAY 28, 2022 First Day of Teaching: Jan 17, 2022	Break Break 1 2
FEB-22	30 6 13 20 27	<31> 7 14 21 28	[1] 8 15 22	9 16 23	[3] 10 17 24	$\underbrace{4}_{11}_{18}_{25}$	5 12 19 26	Class Suspension Period for the Lunar New Year: Feb 1 - 7, 2022	3 4 5
MAR-22	6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 (16) 23 30	3 10 17 24 31	4 11 18 25	5 12 19 26	Reading/ Field Trip Week: Mar 7 - 12, 2022	6 7(Reading) 8 9 10
APR-22	3 10 17 24	4 11 [18] 25	[5] 12 19 26	6 13 20 27	7 14 21 28	1 8 [15] 22 29	2 9 [16] 23 30	Last Day of Teaching: Apr 30, 2022	11 12 13 14
MAY-22	1 8 15 22 29	[2] [9] 16 23 30	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	Revision Period: May 2 - 7, 2022 Assessment Period: May 9 - 28, 2022	15(Revision) 1 2 3
JUN-22	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 23 30	[3] 10 17 24	4 11 18 25	OPTIONAL SUMMER SEMESTER JUN 27 - AUG 20, 2022	Break Break Break Break 1
JUL-22	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	[1] 8 15 22 29	2 9 16 23 30		2 3 4 5
AUG-22	7 14 21 28	1 8 15 22 29	2 9 16 23 30	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27		6 7 8
[] General Holid () University Ho <> University H				Reading/ Fie Revision Per Class Suspen	iod	ck for the Lunar N	l ew Year		

Assessment Period

Notes:

First Semester: 12 Mondays and Tuesdays, 11 Wednesdays, 12 Thursdays, 11 Fridays, 12 Saturdays Second Semester: 11.5 Mondays, 12 Tuesdays and Wednesdays, 13 Thursdays, 12 Fridays and Saturdays

Faculty of Science	Office Location	:	Ground Floor,			
ractily of ocience	Onice Location	•	Chong Yuet Ming Physics Building			
	Tel	:	3917 2683			
	Fax	:	2858 4620			
	Email	:	science@hku.hk (General Enquiries)			
			sci.ug.enquiry@hku.hk (Academic Matters)			
			sci.ug.el@hku.hk (Experiential Learning &			
			Enrichment Opportunities)			
	Website	:	https://www.scifac.hku.hk/			
	(Please visit <u>https://www.scifac.hku.hk/</u> for the latest updates of BSc courses, timetables, notices and forms)					
Departments/Schools						
Biological Sciences	Website	:	https://www.biosch.hku.hk/			
Biomedical Sciences	Website	:	http://www.sbms.hku.hk/			
Chemistry	Website	:	https://www.chemistry.hku.hk/			
Earth Sciences	Website	:	https://www.earthsciences.hku.hk/			
Mathematics	Website	:	https://hkumath.hku.hk/web/index.php			
Physics	Website	:	https://www.physics.hku.hk/			
Statistics and Actuarial Science	Website	:	https://saasweb.hku.hk/			
Academic Advising Office	Tel	:	3917 0128			
	Website	:	http://aao.hku.hk			
Academic Services Office	Office Location	:	G04, Run Run Shaw Building			
	Tel	:	2859 2433			
	Fax	:	2540 1405			
	Email	:	asoffice@hku.hk			
	Website	:	http://www.ase.hku.hk			
Common Core courses	Website	:	https://commoncore.hku.hk/			
HKU Worldwide Undergraduate Exchange Programme	Website	:	https://aal.hku.hk/studyabroad/			
Centre of Development and	Tel	:	3917 2305			
Resources for Students (CEDARS)	Website	:	https://www.cedars.hku.hk/			
University Health Service	Tel	:	3917 2501 (General enquiries)			
			2549 4686 (Medical appointments only)			
	Website	:	http://www.uhs.hku.hk			
Plagiarism	Website	:	https://tl.hku.hk/plagiarism/			