City University of Hong Kong
Course Syllabus

offered by Department of Mathematics
with effect from Semester A 2022/23

Part I   Course Overview

Course Title:	Project
Course Code:	MA6616
Course Duration:	Two semesters (Semester B and Summer term)
Credit Units:	1
Level:	P6
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: *(Course Code and Title)*	Nil
Precursors: *(Course Code and Title)*	Nil
Equivalent Courses: *(Course Code and Title)*	Nil
Exclusive Courses: *(Course Code and Title)*	Nil

Part II   Course Details

1. **Abstract**

    This course aims to:
    - enhance students' awareness and exposure to advanced topics in financial mathematics and statistics;
    - broaden students' knowledge and keep them abreast of recent advances in areas of financial mathematics and statistics; and
    - develop students' skills in collaboration, communication, and presentation.

2. **Course Intended Learning Outcomes (CILOs)**
    (CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Initiate independent studies in advanced topics of financial mathematics and statistics.	-	✓	✓	
2.	Advance knowledge of various areas of financial mathematics and statistics by conducting literature search and integrating up-to-date research development to their courses of study.	-	✓	✓	✓
3.	Acquire effective communication skills of presenting Mathematical knowledge professionally.	-	✓	✓	✓
4.	Prepare a presentation summarizing research advances and/or progress in specific topic(s).	-	✓	✓	✓
		100%			

A1:   Attitude
   Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.
A2:   Ability
   Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.
A3:   *Accomplishments*
   Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)
(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No. 1	2	3	4			Hours/week (if applicable)
Seminar participation	Learning through participation in seminars, consultation, project (or group project) to acquire specific knowledge and techniques, exchange academic ideas and improve quality of written work.	✓	✓	✓	✓			
Seminar presentation	Learning through presentation enables students to report research development of specific topic(s) orderly and/or to relate its relevance to subject knowledge.	✓	✓	✓	✓			-

4. Assessment Tasks/Activities (ATs)
(ATs are designed to assess how well the students achieve the CILOs.)

100% coursework assessment (based on report, seminar participation and seminar presentations.)

Students are required to conduct (group) projects, write project reports, and give seminar presentations on a date set by the course examiner.

Assessment Tasks/Activities	CILO No. 1	2	3	4			Weighting	Remarks
Continuous Assessment: 100%								
Report	✓	✓	✓	✓			50%	It should include students' own account of investigations and findings, with a systematic and critical exposition of knowledge in literature. The student is also required to present materials coherently, with all the necessary references stated
Seminar participation	✓	✓	✓	✓			20%	Participation in seminar or other academic activities engages students in appreciating more advanced topics of their interest.
Seminar presentation	✓	✓	✓	✓			30%	Students are assessed on their ability of presenting substantial knowledge and research development of chosen topic(s).
Examination: ____% (duration: , if applicable)								
							100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Applicable to students admitted in Semester A 2022/23 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Report	DEMONSTRATION of the understanding of the basic principles of research ethics	High	Significant	Basic	Not even reaching marginal levels
2. Seminar participation	CAPACITY FOR SELF-DIRECTED LEARNING to understand recent research topics and frontiers of applied mathematics as well as mathematical knowledge and presentation skills.	High	Significant	Basic	Not even reaching marginal levels
3. Seminar presentation	ABILITY to report research development of specific topic(s) orderly and/or to relate its relevance to subject knowledge.	High	Significant	Basic	Not even reaching marginal levels

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Report	DEMONSTRATION of the understanding of the basic principles of research ethics	High	Significant	Moderate	Basic	Not even reaching marginal levels.
2. Seminar participation	CAPACITY FOR SELF-DIRECTED LEARNING to understand recent research topics and frontiers of applied mathematics as well	High	Significant	Moderate	Basic	Not even reaching marginal levels.

	as mathematical knowledge and presentation skills.				
3. Seminar presentation	ABILITY to report research development of specific topic(s) orderly and/or to relate its relevance to subject knowledge.	High	Significant	Moderate	Basic	Not even reaching marginal levels.

Part III   Other Information (more details can be provided separately in the teaching plan)

1.   Keyword Syllabus
   (An indication of the key topics of the course.)

   - Independent study
   - Literature search
   - Project or group project
   - Communication and presentation skills

2.   Reading List
2.1   Compulsory Readings
   (Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Steven E. Shreve, Stochastic Calculus for Finance II: Continuous-Time Models, Springer, 2010
2.	
3.	
…	

2.2   Additional Readings
   (Additional references for students to learn to expand their knowledge about the subject.)

1.	
2.	
3.	
…	