



Bachelor of Science in Quantitative Finance [BSc(QFin)] Curriculum Requirements (Total: 240 credits)
(Please refer to the BSc(QFin) Degree Syllabus of the 2022-2023 intake for details.)

1. UG5 Requirements (10 courses; 54 credits)

(a) Language Courses (3 courses; 18 credits): (i) CAES1000 Core University English + (ii) CAES9920 Academic Communication for Business and Economics + (iii) CBBA9003 Practical Chinese for BEcon/BEcon&Fin/BSc(QFin) Students

- CAES1000 Core University English (CUE) is a compulsory course for all undergraduate students. Students must enrol in CAES1000 in either Semester 1 or 2 of Year 1 unless exemption or advanced standing has been granted. Students who have achieved Level 5 or above in English Language in HKDSE, or equivalent, are exempted from the CUE requirement, and CAES1000 is optional. Those who do not take CAES1000 should take a free elective course in lieu.

Students who have achieved Level 5 or above in HKDSE English Language are automatically exempted from the CUE requirement. Those who have attained the equivalencies to Level 5 or above in HKDSE English Language are also eligible to apply for exemption from the CUE requirement. To apply for exemption from the CUE requirement, students should complete the online application form at the HKU Business School (the School) website (<https://ug.hkubs.hku.hk/support-and-development/useful-info/downloadable-forms>) by the deadline. Students with Level 3 or Level 4 in HKDSE English Language are NOT allowed to use any of the equivalent standards to get exempted from CAES1000.

- Putonghua-speaking candidates must take CUND9002 Practical Chinese and Hong Kong Society or CUND9003 Cantonese for Non-Cantonese Speaking Students (instead of CBBA9003 Practical Chinese for BEcon/BEcon&Fin/BSc(QFin) Students). Students who have not studied the Chinese language during their secondary education or who have not attained the requisite level of competence in the Chinese language to take CBBA9003 should apply for exemption from the Chinese language requirement and take a 6-credit Cantonese or Putonghua language course offered by the School of Chinese especially for international and exchange students, or take a free elective course, in lieu of CBBA9003. To apply for exemption from the Chinese language requirement, students should complete the application form at the School website (<https://ug.hkubs.hku.hk/support-and-development/useful-info/downloadable-forms>) and return it to the Faculty Office by the deadline.

(b) Common Core Courses (6 courses; 36 credits)

Students shall complete a total of 6 Common Core courses (36 credits), comprising at least one and not more than two courses from each Area of Inquiry (AoI) 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. Please refer to the Common Core website (<https://commoncore.hku.hk/>) for details.

(c) Non-credit Bearing Courses under UG5(e) (1 course – subject to change; 0 credits): UG5E1001 Introduction to the Constitution, the Basic Law and the National Security Law

UG5E1001 Introduction to the Constitution, the Basic Law and the National Security Law is an online course which adopts a self-directed learning approach. Students have the flexibility to take the course in any semester throughout their period of study. Enrolment on the course is automatic.

2. Compulsory Major in Quantitative Finance (QFin) (16 courses; 96 credits)

(a) Faculty Core Courses (FCC) (4 courses; 24 credits): (i) ACCT1101 Introduction to Financial Accounting + (ii) ECON1210 Introductory Microeconomics + (iii) FINA1310 Corporate Finance + (iv) Statistics Course (for BSc(QFin), this is STAT2601 Probability and Statistics I)

- FCC can only be double-counted across major-major, but not major-minor combination. Should the FCC constitute the requirements of a second major or a minor offered by HKU Business School, students will be required to take an equivalent number of credits of free electives (for major-major combination) or advanced level minor disciplinary electives (for major-minor combination) in lieu of the overlapped FCC.
- Double-counting is NOT allowed for courses other than the FCC. Students will be required to take an equivalent number of credits of advanced level disciplinary electives under the major/minor concerned in lieu of the overlapped courses.
- Please refer to the induction powerpoint for further explanation on double-counting.

(b) Disciplinary Core Courses (9 courses; 54 credits): (i) COMP1117 Computer Programming + (ii) ECON1220 Introductory Macroeconomics + (iii) ECON2280 Introductory Econometrics + (iv) FINA2320 Investments and Portfolio Analysis + (v) FINA2322 Derivatives + (vi) FINA3350 Mathematical Finance + (vii) FINA3351 Spreadsheet Financial Modelling + (viii) MATH1013 University Mathematics II + (ix) MATH2014 Multivariable Calculus and Linear Algebra

- Students who would like to build a strong mathematics foundation may apply to the School Office for taking MATH2211 Multivariable Calculus and MATH2101 Linear Algebra I in lieu of MATH2014 Multivariable Calculus and Linear Algebra. To match the required credits, MATH2211 shall substitute MATH2014 while MATH2101 shall be counted as a free elective to satisfy the QFin curriculum requirements.
- Students who would like to have more in depth knowledge in financial mathematics may apply to the School Office for taking MATH3906 Financial Calculus in lieu of FINA3350 Mathematical Finance to satisfy the QFin curriculum requirements. Please refer to the induction powerpoint for further details.

(c) QFin Disciplinary Electives (2 courses; 12 credits): Please refer to [Attachment I](#) for the list of QFin disciplinary electives.

(d) Capstone Course (1 course; 6 credits): FINA4341 Quantitative Risk Management or FINA4354 Financial Engineering

3. Free Electives (15 courses; 90 credits)

Free electives are courses in any disciplines except Common Core and Chinese Language Enhancement courses. These include (1) courses used to fulfil an optional second major and/or minor(s) requirements or (2) QFin disciplinary electives that are not counted in the 96-credit Major in QFin requirements.

[Note: Second major and minor(s) are optional and must be declared via SIS. The earliest time students can declare their second major/minor(s) is the preliminary course enrolment period in Year 2. The latest time students can declare or change their second major/minor(s) is the end of the add/drop period in Semester 1 of Year 4.]

The BSc(QFin) degree regulations and syllabus, course descriptions, and course outlines are downloadable from the School website (<https://ug.hkubs.hku.hk>). For enquiries regarding the BSc(QFin) curriculum, please contact the Faculty Office by email to fbe.undergrad@hku.hk. It is important that you state your full name, university number, curriculum, and year of study in the email.

QFin Disciplinary Electives

Course Code	Course Title	Suggested Year of Study	Credits
COMP2119	Introduction to Data Structures and Algorithms	2 or 3 or 4	6
ECON3225	Big Data Economics	3 or 4	6
ECON3283 <i>or</i> STAT4601	Economic Forecasting <i>or</i> Time Series Analysis	3 or 4	6
FINA2390	Financial Programming and Databases	2 or 3 or 4	6
FINA3322	Credit Risk	3 or 4	6
FINA3323	Fixed Income Securities	2 or 3 or 4	6
FINA3325	Alternative Investments	3 or 4	6
FINA3353	Regulatory, Operational and Valuation Issues in Finance Institutions	3 or 4	6
FINA4341	Quantitative Risk Management (<i>if not taken as capstone course</i>)	4	6
FINA4350	Text Analytics and Natural Language Processing in Finance and Fintech	3 or 4	6
FINA4354	Financial Engineering (<i>if not taken as capstone course</i>)	4	6
FINA4359	Big Data Analytics Applied Toward Quantitative Finance	3 or 4	6
IIMT3601	Database Management	2 or 3 or 4	6
MATH3405	Differential Equations	3 or 4	6
MATH3603 <i>or</i> STAT3603	Probability Theory <i>or</i> Stochastic Processes	3 or 4	6
STAT2602	Probability and Statistics II	2 or 3 or 4	6

(*Note: Many courses listed above are usually offered once a year in Semester 1 or 2 or may not be offered every year. Please take this into account in your course planning and check with relevant faculties in advance.)

Pre-requisites/Co-requisites

Course Category	Course	Year	Pre-requisite(s)	Co-requisite(s)
Faculty Core Courses	FINA1310	1	ACCT1101	
	STAT2601	2	/	MATH2014 or (MATH2101 and MATH2211)
QFin Disciplinary Core Courses	MATH1013	1	Level 2 or above in Module 1, or Module 2 of HKDSE Mathematics or equivalent or (MATH1009 or MATH1011)	
	MATH2014	1	MATH1013 or (MATH1851 and MATH1853)	
	ECON2280	2	ECON1210 and (ECON1280 or MATH1853 or STAT1601 or STAT1602 or STAT1603 or STAT2601 or STAT2901)	
	FINA2320	2	FINA1310 and ECON1210	ECON1280 or STAT1600 or STAT1601 or STAT1602 or STAT1603 or STAT2601 or STAT2901 or MATH1853
	FINA2322	2	FINA1310 and ECON1210	
	FINA3350	3	FINA2322	
	FINA3351	3	FINA2322 and (FINA2320 or STAT3609)	
QFin Disciplinary Electives/ Capstone Course	COMP2119	2 or 3 or 4	COMP2113 or COMP2123 or ENGG1340	
	ECON3225	3 or 4	ECON2280 or ECON3284	
	ECON3283	3 or 4	ECON2280	
	STAT4601	3 or 4	STAT3600	
	FINA2390	2 or 3 or 4	ACCT1101 or ECON1210 or FINA1310	
	FINA3322	3 or 4	FINA2322	
	FINA3323	2 or 3 or 4	ECON1210 and (FINA2322 or STAT3905) and (FINA2320 or STAT3609)	
	FINA3325	3 or 4	FINA2322 and (FINA2320 or STAT3609)	
	FINA3353	3 or 4	FINA2320	
	FINA4341	4	FINA3350	
	FINA4354	4	FINA3350	
	FINA4359	3 or 4	ECON1210 and FINA2320 and (IIMT2602 or COMP1117 or ENGG1111 or equivalent)	
	IIMT3601	2 or 3 or 4	/	
	MATH3405	3 or 4	(MATH2101 and MATH2211) or MATH2014 or (MATH1821 and MATH2822)	
	MATH3603	3 or 4	(MATH2101 and MATH2211) or MATH2014 or (MATH1821 and MATH2822)	
STAT3603	3 or 4	STAT2601		
STAT2602	2 or 3 or 4	STAT2601		