

# **REGULATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN QUANTITATIVE FINANCE [BSC(QFIN)]**

These regulations apply to candidates admitted to the first year of study of the 4-year curriculum in the academic year 2019-20 and thereafter.

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

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## **Admission to the degree**

**BSC(QF) 1** To be eligible for admission to the degree of Bachelor of Science in Quantitative Finance, 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 the regulations that follow and the syllabuses of the degree.
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## **Period of study**

**BSC(QF) 2** The curriculum for the degree of Bachelor of Science in Quantitative Finance shall normally require eight semesters of full-time study, spreading over four academic years, and shall include any assessment to be held during and/or at the end of each semester. The maximum period of registration is equivalent to a period which is 150% of the curriculum's normative period of study. Candidates shall in any case be required to complete the curriculum within six academic years, unless otherwise required or permitted by the Board of the Faculty.

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## **Curriculum requirements and progression in curriculum**

**BSC(QF) 3** To complete the curriculum, candidates

- (a) shall comply with the General Regulations;
  - (b) shall satisfy the requirements prescribed in UG 5 of the Regulations for First Degree Curricula;
  - (c) shall enroll and attempt examination in not fewer than 240 credits of courses, in the manner specified in the syllabuses;
  - (d) shall normally be required to enroll in at least 60 credits of courses in an academic year<sup>1</sup>, in a manner as prescribed in the syllabuses;
  - (e) shall normally be required to take not fewer than 24 credits nor more than 30 credits in any one semester (except the summer semester), or except in the last semester of study when candidates may be required to take fewer than 24 credits to satisfy the outstanding curriculum requirements;
  - (f) may, of their own volition, take further credits during the regular or summer semesters<sup>2</sup>, accumulating up to a maximum of 72 credits in one academic year<sup>1</sup>;
  - (g) may, with the approval of the Board of the Faculty, exceed 72 credits in an academic year<sup>1</sup> provided that the total number of credits taken shall not exceed 288 credits; or where courses taken to make up for failed credits are inclusive, the total number of credits shall not exceed the maximum curriculum study load for the 432 credits;
  - (h) may select not more than 12 credits of courses in the summer semester<sup>2</sup>, unless otherwise permitted by the Board of the Faculty;
  - (i) shall select courses accumulating 96 credits to declare a major in Quantitative Finance, as prescribed in the syllabuses, and to take electives to make up the balance of 240 credits; and
  - (j) may be required by the Board of the Faculty to take a reduced study load of not fewer than 24 credits per semester if their academic progression is unsatisfactory.
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## **Advanced standing**

**BSC(QF) 4** Advanced standing may be granted to candidates in recognition of studies completed successfully, in accordance with UG 2 of the Regulations for First Degree Curricula. The maximum number of advanced standing credits that may be granted is up to one-half the number of credits required for the award of the degree. Advanced standing credits granted shall not be included in the calculation of the GPA nor taken into consideration for the honours classification of the degree to be awarded unless permitted by the Board of the Faculty but will be recorded on the transcript of the candidate.

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## **Exemption**

**BSC(QF) 5** Candidates may be exempted, with or without special conditions attached, from any of the requirements in the syllabuses by the Board of the Faculty. Candidates who are so exempted must replace the number of exempted credits with courses of the same credit value.

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## **Selection of courses**

**BSC(QF) 6** Candidates shall select courses in accordance with these regulations and the guidelines specified in the syllabuses before the beginning of each semester. Changes to the selection of courses may be made during an add-drop period designated for each semester, and such changes shall not be reflected in the transcript of the candidates. Requests for changes after the designated add-drop period of a semester shall not be considered, and candidates withdrawing from any course without permission after the designated add-drop period of a semester shall be given an F grade.

**BSC(QF) 7** Candidates shall not be permitted to select a course for which a failed course forms a prerequisite unless permission is given by the department concerned to sit a qualifying examination in the failed course and satisfy the examiners in this.

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## **Assessment**

### **BSC(QF) 8**

- (a) Candidates shall be assessed for each of the courses for which they have registered, and assessment may be conducted in any one or any combination of the following manners: written examinations or tests, continuous assessment of performance, laboratory work, field work, research or project reports, or in any other manner as specified in the syllabuses.
  - (b) 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.
  - (c) There shall be no appeal against the results of examinations and all other forms of assessment.
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## **Grades**

**BSC(QF) 9** Grades shall be awarded in accordance with UG 8 of the Regulations for First Degree Curricula.

**BSC(QF) 10** Candidates shall not be permitted to repeat courses for which they have received a pass grade for the purpose of upgrading.

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### **Absence from examination**

**BSC(QF) 11** Candidates who are unable, because of illness, to be present at any examinations of a course, may apply for permission to present themselves for a supplementary examination to be held not later than the beginning of the first semester of the following academic year. 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.

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### **Failure in examination**

**BSC(QF) 12** Candidates are required to make up for a failed course in the following manner:

- (a) 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
- (b) re-submitting failed coursework, without having to repeat the same course of instruction; or
- (c) repeating the failed course by undergoing instruction and satisfying the assessments; or
- (d) for an elective course, taking another course in lieu of the failed course and satisfying the assessment requirements.

**BSC(QF) 13** The maximum number of attempts for a particular course or requirement is three.

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### **Unsatisfactory performance**

**BSC(QF) 14** Candidates shall be recommended for discontinuation under the provisions of General Regulation G 12 and UG 4(e) of the Regulations for First Degree Curricula if they have:

- (a) 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
  - (b) failed to achieve an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester); or
  - (c) exceeded the maximum period of registration specified in BSC(QF) 2.
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### **Award of degree**

**BSC(QF) 15** To be eligible for the award of the degree of Bachelor of Science in Quantitative Finance, candidates shall have

- (a) achieved a Graduation GPA of 1.0 or above;
  - (b) accumulated a minimum of 240 credits and passed all the compulsory courses required in the syllabuses; and
  - (c) satisfied the requirements in UG 5 of the Regulations for First Degree Curricula.
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## Degree classification

### BSC(QF) 16

- (a) Honours classification 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 in accordance with the following Graduation GPA (GGPA) scores, with all courses taken (including failed courses) carrying weightings which are proportionate to their credit values<sup>3</sup>:

<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 BSC(QF) 16(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.

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<sup>1</sup> An 'academic year' comprises two regular semesters, with dates as prescribed by the Senate each year. A 'summer semester' may be organised in addition to the two regular semesters.

<sup>2</sup> Candidates are normally not allowed to take summer course(s) in their final year of study.

<sup>3</sup> 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.

**SYLLABUS FOR THE DEGREE OF  
BACHELOR OF SCIENCE IN QUANTITATIVE FINANCE  
[BSC(QFIN)]**

This syllabus applies to candidates admitted to the first year of study of the 4-year curriculum in the academic year 2019-20 and thereafter.

1. Candidates must enroll and attempt examination in not fewer than 240 credits of courses in accordance with the regulations and the syllabuses. In addition, the 240 credits of courses should be completed in the following manner:

UG 5 requirements [54 credits]	
Languages*	18 credits
HKU Common Core Curriculum*	36 credits
Major in Quantitative Finance [96 credits]	
- First year Core courses	36 credits
- Second year Core courses	36 credits
- Third year Core courses	12 credits
- Fourth year Core courses	12 credits
Free Electives [90 credits]	90 credits
Total credits for degree programme	240 credits

2. To fulfill the graduation requirement of this degree as specified in the Board of the Faculty of Business and Economics in accordance with UG 5 of the Regulations for the First Degree Curricula, candidates must satisfactorily complete the credits of courses identified by an asterisk (\*). Those courses include the following areas of study: English language enhancement (12 credits), Chinese language enhancement (6 credits) and Common Core courses (36 credits), and successful completion of a capstone experience.
3. The Common Core courses are categorized under four Areas of Inquiry (AoI): Scientific and Technological Literacy, Humanities, Global Issues, and China: Culture, State and Society. Candidates must complete a total of 36 credits, comprising at least one and not more than two courses from each Area of Inquiry 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.
4. The following courses are designated as Faculty Core courses: ACCT1101, ECON1210, FINA1310 and a statistics course, as prescribed in the syllabus. Candidates are not required to re-take Faculty Core courses where any of these courses form part of the requirements of a second major offered by the Faculty of Business and Economics, however, candidates must complete an equivalent number of credits of free electives in lieu of the Faculty Core courses.
5. The courses listed in the syllabus will not necessarily be offered every year.
6. For courses offered by the Faculty of Business and Economics, the final examination is normally 2 hours in length. Final grading will normally be determined by the final examination (30-60%) and coursework (40-70%) except for final project/final papers which will be assessed by 100% coursework.
7. Candidates may select up to four courses offered under the syllabus for the Master of Economics (MEcon) degree as third or fourth year free electives, subject to availability and the approval of the BSc(QFin) Programme Director and the MEcon Programme Director. Each of these MEcon courses carries 6 credits, unless otherwise specified. Candidates should satisfy the requirements prescribed by the Faculty of Business and Economics.
8. Candidates should take note of any impermissible combinations of majors/minors listed in the document "Major/Minor Programmes offered by FBE" for the year concerned.
9. Candidates are not permitted to enroll in courses where significant portions of the course contents overlap with each other, or where the courses are mutually exclusive.

## 1. UG 5 requirements [54 credits]

### (a) Languages\* [18 credits]

<i>Course code</i>	<i>Course title</i>	<i>Year of study</i>	<i>Credits</i>
CAES1000 <sup>#</sup>	Core University English *	1	6
CAES9920	Academic communication for business and economics*	2	6
CBBA9003 <sup>^</sup> <i>or</i>	Practical Chinese for BEcon/BEcon&Fin/BSc(QFin) students* <i>or</i>	3	6
CUND9002 <sup>^</sup> <i>or</i>	Practical Chinese and Hong Kong society <i>or</i>	1 or 2 or 3	
CUND9003 <sup>^</sup>	Cantonese for Non-Cantonese speaking students	1 or 2 or 3	

<sup>#</sup> Candidates who have achieved Level 5 or above in English Language in the Hong Kong Diploma of Secondary Education Examination, or equivalent, are exempted from this requirement, and Core University English is optional. Those who do not take this course should take an elective course in lieu, see *Regulation UG 6*.

<sup>^</sup> Putonghua-speaking students must take CUND9002 or CUND9003. 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 write to the Board of the Faculty to 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. If a Cantonese or Putonghua language course offered by the School of Chinese or a free elective course is taken in lieu of CBBA9003, it may be taken in any year of study.

### (b) HKU Common Core Curriculum\* [36 credits]

<i>Course code</i>	<i>Course title</i>	<i>Year of study</i>	<i>Credits</i>
CCXXxxxx	3 CC courses in any three Areas of Inquiry*	1	18
CCXXxxxx	2 CC courses in any two Areas of Inquiry*	2	12
CCXXxxxx	1 CC course in any Area of Inquiry*	3	6

## 2. Major in Quantitative Finance [96 credits]

<i>Course code</i>	<i>Course title</i>	<i>Year of study</i>	<i>Credits</i>
<b><i>Introductory Level Courses</i></b>			
ACCT1101	Introduction to financial accounting	1	6
ECON1210	Introductory microeconomics	1	6
ECON1220	Introductory macroeconomics	1	6
FINA1310	Corporate finance	1	6
MATH1013	University mathematics II	1	6
MATH2014	Multivariable calculus and linear algebra	1	6
COMP1117	Computer programming	2	6
<b><i>Advanced Level Courses</i></b>			
ECON2280	Introductory econometrics	2	6
FINA2320	Investments and portfolio analysis	2	6
FINA2322	Derivatives	2	6
STAT2601	Probability and statistics I	2	6
FINA3350	Mathematical finance	3	6
FINA3351	Spreadsheet financial modeling	3	6
<i>Complete three courses from the following thirteen, at least one of them must be a capstone course:</i>			
FINA2390	Financial programming and databases	2 or 3 or 4	18
FINA3322	Credit risk	3 or 4	
FINA3323	Fixed income securities	2 or 3 or 4	
FINA3353	Regulatory and operational issues in finance	3 or 4	
ECON3283 <i>or</i>	Economic forecasting <i>or</i>	3 or 4	
STAT4601	Time series analysis		

<i>Course code</i>	<i>Course title</i>	<i>Year of study</i>	<i>Credits</i>
MATH3405	Differential equations	3 or 4	
MATH3603 <i>or</i>	Probability theory <i>or</i>	3 or 4	
STAT3603	Stochastic processes		
FINA4341	Quantitative risk management* (Capstone course)	4	
FINA4350	Text analytics and natural language processing in finance and fintech	3 or 4	
FINA4359	Big data analytics applied toward quantitative finance	3 or 4	
FINA4354	Financial engineering* (Capstone course)	4	

**3. Free Electives [90 credits]** – any courses except Common Core courses

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**REFERENCE TABLE**

<b>Year</b>	<b>Lang.</b>	<b>Common Core</b>	<b>Major (Core)</b>	<b>Free Electives</b>	<b>Total</b>
<b>I</b>	6 credits	18 credits	36 credits	-	60 credits
<b>II</b>	6 credits	12 credits	36 credits	6 credits	60 credits
<b>III</b>	6 credits	6 credits	12 credits	36 credits	60 credits
<b>IV</b>	-	-	12 credits	48 credits	60 credits
<b>Total</b>	18 credits	36 credits	96 credits	90 credits	240 credits