

Quantitative Finance (BSc Programme)

Course List

<i>Code</i>	<i>Course Title</i>	<i>Unit</i>
Required Courses		
ACY 1111	Introductory Financial Accounting	3
ACY 1112	Management Accounting for Decision Making	3
CSC 1500	Computer Principles and Programming	3
DSE 1030	Economics for Business Studies I	3
DSE 1040	Economics for Business Studies II	3
<i>either</i> DSE 2010	Statistical Analysis for Business Decisions I	3
DSE 2020	Statistical Analysis for Business Decisions II	3
<i>or</i> STA 2001	Basic Concepts in Statistics and Probability I	4
STA 2006	Basic Concepts in Statistics and Probability II	4
<i>either</i> DSE 2050[3050]	Information Systems and E-Commerce	4
<i>or</i> SEG 3540	Concepts of Information Systems	3
FIN 2010	Financial Management	3
FIN 4072	Quantitative Finance	3
<i>either</i> MAT 2010	Advanced Calculus I	3
<i>or</i> MAT 2080	Essential Mathematical Methods I	3
MAT 2310	Linear Algebra and Applications	3
A. Applicable to students admitted in 2003-04 and thereafter		
Elective Courses		
<i>Business</i>		
ACY 3214	Financial Statement Analysis	3
FIN 2020	Interest Theory and Finance	3
FIN 3010	Financial Markets	3
FIN 3020	International Finance	3
FIN 3030	Management of Financial Institutions	3
FIN 3040	Commercial and Central Banking	3
FIN 3050	Risk Management and Insurance	3
FIN 3060	Real Estate Finance and Investment	3
FIN 3080	Investment Analysis and Portfolio Management	3
FIN 4010	Corporate Finance : Theory and Practice	3
FIN 4011	Foreign Exchange Practices	3
FIN 4030	Selected Topics in Finance	3
FIN 4040	Options and Futures	3
FIN 4050	Mergers and Acquisitions	3
FIN 4060	China Finance	3
FIN 4070	Fixed Income Securities Analysis	3
FIN 4080	Cases in Corporate Finance	3
FIN 4090	Corporate Property and Liability Insurance	3
FIN 4091	Life and Health Insurance	3
FIN 4092	Principle of Reinsurance	3
FIN 4096	Employee Benefits, Retirement and Estate Planning	3

FIN 4100	E-Finance	3
MGT 1020	Principles of Management	3
MGT 4010	Business Policy and Strategy	3
MKT 2010	Marketing Management	3

Quantitative Methods

ECO 3121	Introductory Econometrics	3
FIN 3090	Actuarial Modelling	3
FIN 4081	Computational Finance	3
FIN 4082	Quantitative Methods for Financial Derivatives	3
FIN 4088	Intermediate Financial Theory	3
FIN 4095	Advanced Actuarial Modelling	3
FIN 4097	Applications of Loss Models	3
MAT 3300	Mathematical Modeling	3
MAT 4240	Stochastic Processes	3
SEG 3440	Operations Research II	3
STA 3006	Statistical Computing	3
STA 3007	Applied Probability	3
STA 4005	Time Series	3

B. Applicable to students admitted in 2002-03 and before**Elective Courses***Business*

FIN 3010	Financial Markets	3
FIN 3020	International Finance	3
FIN 3030	Management of Financial Institutions	3
FIN 3040	Commercial and Central Banking	3
FIN 3050	Risk Management and Insurance	3
FIN 3060	Real Estate Finance and Investment	3
FIN 3080	Investment Analysis and Portfolio Management	3
FIN 4010	Corporate Finance: Theory and Practice	3
FIN 4040	Options and Futures	3
FIN 4050	Mergers and Acquisitions	3
FIN 4060	China Finance	3
FIN 4070	Fixed Income Securities Analysis	3
FIN 4080	Cases in Corporate Finance	3
FIN 4090	Corporate Property and Liability Insurance	3
FIN 4100	E-Finance	3
MGT 1020	Principles of Management	3
MKT 2010	Marketing Management	3

Quantitative Methods

ECO 3121	Introductory Econometrics	3
FIN 4081	Computational Finance	3
FIN 4082	Quantitative Methods for Financial Derivatives	3
FIN 4088	Intermediate Financial Theory	3
MAT 3300	Mathematical Modeling	3
MAT 4210	Financial Mathematics	3
MAT 4240	Stochastic Processes	3
SEG 3410	System Simulation	3

SEG 3440	Operations Research II	3
STA 3006	Statistical Computing	3
STA 3007	Applied Probability	3
STA 4004	Actuarial Science	3
STA 4005	Time Series	3

Course Description

(For the course descriptions of the above courses, please refer to the programmes concerned. Unless otherwise specified, all are 3-unit term courses of three hours of lecture per week.)

Study Scheme

I. Major Programme

A. Applicable to students admitted in 2003-04 and thereafter

Students are required to complete a minimum of 69-72 units of courses as follows:

- | | | |
|------|--|-------------|
| (i) | Required Courses: | 36-39 units |
| | (a) ACY 1111, 1112, CSC 1500, DSE 1030, 1040, FIN 2010, 4072, MAT 2310 [#] | |
| | (b) Either (DSE 2010 [#] and 2020 [#]) or (STA 2001 [#] and 2006 [#])
Either DSE 2050 [#] or SEG 3540 [#]
Either MAT 2010 [#] or 2080 [#] | |
| (ii) | Elective Courses: | |
| | (a) 6 Business elective courses from the following, including at least 5 Finance courses:
ACY 3214 [#] , FIN 2020, 3010, 3020, 3030, 3040, 3050, 3060, 3080, 4010, 4011, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4091, 4092, 4096, 4100, MGT 1020, 4010 [#] , MKT 2010 [#] | 18 units |
| | (b) 5 Quantitative Methods elective courses from the following:
ECO 3121 [#] , FIN 3090, 4081, 4082, 4088, 4095, 4097, MAT 3300 [#] , 4240 [#] or STA 3007 [#] , SEG 3440 [#] , STA 3006 [#] , 4005 [#] | 15 units |

Total: 69-72 units

[#] to be included in the Major GPA as well

- Notes: 1. Students who have obtained Grade “C” or below in HKALE* “Pure Mathematics” are recommended to take the following courses listed in item (i)(b): DSE 2010, 2020, 2050 and MAT 2080.
2. The Department of Systems Engineering and Engineering Management will waive the prerequisites of SEG 3440 for the Quantitative Finance Majors.
- * Only applicable to students admitted on the strength of HKALE results. The HKALE results to be deemed acceptable for the recommendation must be obtained in that particular sitting of HKALE which the University has used to assess the admission qualification of the student concerned.

B. Applicable to students admitted in 2002-03 and before

Students are required to complete a minimum of 69-72 units of courses as follows:

(i)	Required Courses:	36-39 units
(a)	ACY 1111, 1112, CSC 1500, DSE 1030, 1040, FIN 2010, 4072, MAT 2310 [#]	
(b)	Either (DSE 2010 [#] and 2020 [#]) or (STA 2001 [#] and 2006 [#]) Either DSE 2050 [#] or SEG 3540 [#] Either MAT 2010 [#] or 2080 [#]	
(ii)	Elective Courses:	
(a)	6 Business elective courses from the following, including at least 5 Finance courses: FIN 3010, 3020, 3030, 3040, 3050, 3060, 3080, 4010, 4040, 4050, 4060, 4070, 4080, 4090, 4100, MGT 1020, MKT 2010 [#]	18 units
(b)	5 Quantitative Methods elective courses from the following: ECO 3121 [#] , FIN 4081, 4082, 4088, MAT 3300 [#] , 4210 [#] , 4240 [#] or STA 3007 [#] , SEG 3410 [#] , 3440 [#] , STA 3006 [#] , 4004 [#] , 4005 [#]	15 units
		Total: 69-72 units

[#] to be included in the Major GPA as well

- Notes: 1. Students who have obtained Grade "C" or below in HKALE* "Pure Mathematics" are recommended to take the following courses listed in item (i)(b): DSE 2010, 2020, 2050 and MAT 2080.
2. The Department of Systems Engineering and Engineering Management will waive the prerequisites of SEG 3410 and 3440 for the Quantitative Finance Majors.

* Only applicable to students admitted on the strength of HKALE results. The HKALE results to be deemed acceptable for the recommendation must be obtained in that particular sitting of HKALE which the University has used to assess the admission qualification of the student concerned.

Recommended course pattern

<i>First Year of Attendance</i>	27-28 units
ACY 1111, 1112, CSC 1500, DSE 1030, 1040, 2010 or STA 2001, FIN 2010, MAT 2080 or 2010, 2310	
<i>Second Year of Attendance</i>	
DSE 2020 or STA 2006, DSE 2050 or SEG 3540, FIN 4072	9-11 units
3 Business elective courses	9 units
2-3 Quantitative Methods elective courses	6-9 units
<i>Third Year of Attendance</i>	
3 Business elective courses	9 units
2-3 Quantitative Methods elective courses	6-9 units
Total: 69-72 units	

2. *Faculty Language Requirement*

I. Applicable to students admitted through the JUPAS

English

Quantitative Finance Majors who have obtained Grade “D” or below in “Use of English” of HKALE* (AS Level) are required to complete ELT 1100 English Enhancement for Business Studies in their first year of attendance.

Chinese

Quantitative Finance Majors who have obtained Grade “E” in “Chinese Language and Culture” of HKALE* (AS Level) are required to complete CHI 1660 Chinese for Faculty of Business Administration in their first year of attendance.

* *Obtained in that particular sitting of HKALE which the University has used to assess the admission qualification of the student concerned.*

II. Applicable to students admitted through the Early Admissions Scheme (EAS)

English

Quantitative Finance Majors admitted through the Early Admissions Scheme are required to complete ELT 2501 Effective Oral Communication in their first year of attendance.

Chinese

Quantitative Finance Majors admitted through the Early Admissions Scheme are required to complete CHI 1660 Chinese for Faculty of Business Administration in their first year of attendance.

III. Applicable to students NOT admitted through the JUPAS or EAS

English

Quantitative Finance Majors NOT admitted through the JUPAS or EAS are required to complete ELT 1100 English Enhancement for Business Studies in their first year of attendance. They can take a replacement course for this course or be exempted from this course as approved by the Programme Director.

Chinese

Quantitative Finance Majors NOT admitted through the JUPAS or EAS are required to complete CHI 1660 Chinese for Faculty of Business Administration in their first year of attendance. They can take a replacement course for this course or be exempted from this course as approved by the Programme Director.