

Curriculum for BSc in Quantitative Finance

Major Program Requirements

Core courses

| | | | | | |
|-----|------|---------|--|-----------------------------|-----------|
| | FINA | 111 | Financial Management | [3-1-0:3] | |
| | ACCT | 101 | Introduction to Accounting for Business Majors | [4-0-0:4] | |
| (1) | [| ECON | 110 | Introductory Microeconomics | [3-1-0:4] |
| | | or ECON | 111 | Microeconomics | [3-1-0:4] |
| | | or ECON | 191 | Honors Microeconomics | [3-1-0:4] |
| | ISOM | 111 | Business Statistics | [3-1-0:4] | |
| | ISOM | 223 | Business Applications Programming | [3-0-1:3] | |

Required courses

| | | | | |
|-----|------|-----|--|-------------|
| | FINA | 101 | Introduction to Finance | [2-0-0:2] |
| | FINA | 221 | Investment Analysis and Portfolio Management | [3-1-0:4] |
| | FINA | 222 | Derivative Securities | [3-1-0:4] |
| | FINA | 291 | Bloomberg Certification Program | [0-0-1:0] |
| | FINA | 321 | Advanced Financial Management | [3-1-0:4] |
| | FINA | 396 | Finance Practicum I | [0 credit] |
| | FINA | 397 | Finance Practicum II | [4 credits] |
| | COMP | 102 | Computer and Programming Fundamentals I | [3-0-2:3] |
| or | COMP | 104 | Programming Fundamentals and Methodology | [3-1-2:4] |
| | ECON | 233 | Introduction to Econometrics | [3-1-0:4] |
| | ECON | 329 | Econometrics for Financial Data | [3-1-0:4] |
| or | ISOM | 354 | Time Series Analysis and Forecasting | [3-1-0:4] |
| | ISOM | 254 | Introduction to Probability Models | [3-0-0:3] |
| or | MATH | 241 | Probability | [3-1-0:4] |
| (2) | LANG | 111 | Chinese Business Communication I | [0-3-0:3] |
| (3) | MATH | 021 | Concise Calculus | [3-1-0:4] |
| | MATH | 100 | Introduction to Multivariable Calculus | [2-1-0:2] |
| | MATH | 111 | Linear Algebra | [3-1-0:4] |
| or | MATH | 113 | Introduction to Linear Algebra | [2-1-0:2] |
| (4) | MGTO | 222 | Business, Society and the Individual | [1-0-0:1] |

Required elective courses

Any two of the following:

| | | | | |
|--|------|-----|---|-----------|
| | ISOM | 352 | Statistics for Financial Risk Management | [3-1-0:4] |
| | MATH | 361 | Quantitative Methods for Fixed Income Derivatives | [3-1-0:4] |
| | MATH | 362 | Fundamentals of Mathematical Finance | [3-1-0:4] |

Elective courses

| | Elective types | | Minimum no. of courses | Minimum total credits |
|-----|----------------|------------------|---------------------------|--------------------------|
| (5) | FINA | Finance Elective | 1 | 4 |

General Education Requirements

Electives must be selected from amongst those general education courses that are listed under the section “Designated General Education Courses for Undergraduate Students”.

| | Elective types | | Minimum no. of courses | Minimum total credits |
|-----|----------------|--|------------------------|-----------------------|
| | GEE(ENGG) | Engineering General Education Elective | 1 | 3 |
| (6) | GEE(H&SS) | Humanities and Social Science General Education Elective | 4 | 12 |

Required Courses in English Communication

| | | |
|----------|------------------------|-----------|
| LABU 101 | Business Case Analyses | [0-3-0:4] |
| LANG 201 | Business Communication | [0-3-0:3] |

Other Requirement

| | | | |
|-----|----------|--------------------|------------|
| (7) | HLTH 001 | Healthy Life Style | [0 credit] |
|-----|----------|--------------------|------------|

Notes:

- (1) Students entering with AL Economics take ECON 111; however, those with grade B or above in HKAL Economics will take ECON 191. All other students without AL Economics background, including those entering with AL Business and Economics, take ECON 110.
- (2) Students cannot replace this course by LANG 014/015 for graduation purposes. Students recruited from Mainland China will replace this course by a free elective. For international students who are assessed as having inadequate Chinese background to take LANG 111, they will replace this course by LANG 113.
- (3) Students entering with grade D or above in AL Pure Mathematics or AL Applied Mathematics are not required to take MATH 021. Students entering with grade E in AL Pure Mathematics or AL Applied Mathematics, or grade B or above in HKCEE Additional Mathematics, AS Mathematics and Statistics or AS Applied Mathematics will take MATH 021. For students entering with other qualifications, they will be required to take a Mathematics Placement Test to determine if they should take MATH 021.
- (4) Students may take MGTO 222 in either Fall or Spring during their 2nd year of study.
- (5) Students can replace the Finance elective requirement by MATH 361 or MATH 362, if they have taken all three courses of ISOM 352, MATH 361 and MATH 362.
- (6) Of these courses, at least one course in Humanities and one in Social Science are required.
- (7) Students are required to take and pass this course in their first year of study. Details of the course and its requirements are announced on the course website <http://www.ab.usst.hk/sao/HLTH001> managed by the Student Affairs Office.

A minimum of 105 credits is required for the BSc program in Quantitative Finance. Students must take additional course(s) and/or elective(s) of higher-than-required credit value to meet this minimum total of 105 credits.

Recommended Pattern of Study for BSc in Quantitative Finance

| | | | |
|----------|------|--|-------------------------------------|
| 1st year | Fall | C ACCT 101, ISOM 111 | |
| | | R FINA 101, COMP 102/COMP 104, HLTH 001, | |
| | | LABU 101, MATH 021/FREE ⁽¹⁾ | (Total: 17-18 [®] credits) |

CURRICULUM FOR UNDERGRADUATE PROGRAMS

| | | | | |
|----------|--------|---|---|---------------------------------|
| | Winter | R | FINA 101 | (Total: 2 [®] credits) |
| | Spring | C | FINA 111, ECON 110/111/191, ISOM 223 | |
| | | R | HLTH 001, LABU 101, MATH 100, MATH 111/113 | (Total: 18-20* credits) |
| 2nd year | Fall | R | FINA 221, FINA 291, ECON 233, ISOM 254/MATH 241, LANG 111/113/FREE ⁺ , MGTO 222 [#] | |
| | | E | GEE(H&SS) | (Total: 17-19 credits) |
| | Spring | R | FINA 222, FINA 321, ISOM 354/FREE ^{®+} , LANG 201, MGTO 222 [#] | |
| | | E | GEE(H&SS) | (Total: 18-19 credits) |
| 3rd year | Fall | R | FINA 396, ECON 329/FREE [®] , Required elective 1 [^] | |
| | | E | FINA, GEE(H&SS) | (Total: 15 credits) |
| | Spring | R | FINA 397, Required elective 2 [^] | |
| | | E | GEE(ENGG), GEE(H&SS), one or two FREE | (Total: 15-19 credits) |

(1) For students exempted from MATH 021

(2) For students who opt for taking ECON 329 in third year Fall

(3) For students who have taken ISOM 354 in second year Spring

[®] FINA 101 commences in the second half of 1st year Fall. The course credits will be earned on completion of the course at the end of 1st year Winter.

* LABU 101 is a two-semester course. The course credits will be earned on completion of the course at the end of 1st year Spring.

Students may take MGTO 222 in 2nd year Fall or Spring.

+ Recommended electives: ACCT 203, FINA 392, MATH 230

[^] Required electives: two courses from ISOM 352, MATH 361, or MATH 362

C = core course; R = required course; E = elective course

**Recommended Pattern of Study for 120-Credit BSc in Quantitative Finance
(for students admitted through the preparatory year)**

Prep year Please follow the pattern listed on p. 208-209

| | | | | |
|----------|--------|---|--|-------------------------------------|
| 1st year | Fall | C | ACCT 101 | |
| | | R | FINA 101, COMP 102/104, LABU 101 | |
| | | E | Business Breadth Elective (non-FINA), GEE(H&SS) | (Total: 15-16 [®] credits) |
| | Winter | R | FINA 101 | (Total: 2 [®] credits) |

| | | | |
|----------|--------|--|-------------------------|
| | Spring | C FINA 111, ISOM 223 R MATH 111/113, LABU 101 E Business Breadth Elective (non-FINA) | (Total: 15-17* credits) |
| 2nd year | Fall | R FINA 221, FINA 291, ECON 233, ISOM 254/MATH 241, LANG 111/113/FREE, MGTO 222 [#] | (Total: 14-16 credits) |
| | Spring | R FINA 222, FINA 321, ISOM 354/FREE ⁽¹⁾⁺ , LANG 201, MGTO 222 [#] | (Total: 15-16 credits) |
| 3rd year | Fall | R ECON 329/FREE ⁽²⁾ , Required Elective 1 [^] , FINA 396 E FINA, GEE(H&SS) | (Total: 15 credits) |
| | Spring | R FINA 397, Required Elective 2 [^] E GEE(H&SS), one or two FREE | (Total: 12-16 credits) |

(1) For students who opt for taking ECON 329 in third year Fall

(2) For students who have taken ISOM 354 in second year Spring

@ FINA 101 commences in the second half of 1st year Fall. The course credits will be earned on completion of the course at the end of 1st year Winter.

* LABU 101 is a two-semester course. The course credits will be earned on completion of the course at the end of 1st year Spring.

Students may take MGTO 222 in 2nd year Fall or Spring.

+ Recommended electives: ACCT 203, FINA 392, MATH 230

^ Required electives: two courses from ISOM 352, MATH 361, or MATH 362

C = core course; R = required course; E = elective course