# BSc Computational Finance and Financial Technology — Computational Finance Stream - 4 Year Structure   (2022 Intake and thereafter)

## Effective from Catalogue Term: Semester A 2022 / 2023

| Yr/Sem | | | | | | | Offer Year |
|---|---|---|---|---|---|---|---|
| 1A | CB2400 Microeconomics | CS1102 Introduction to Computer Studies | MA1200 Calculus and Basic Linear Algebra I or MA1300 Enhanced Calculus and Linear Algebra I | College-specified course CB2240 Introduction to Business Programming in Python | GE1401 University English or EAP (Note 1) | Sem A or B CHIN1001 University Chinese I (Note 3) | 2022 2023 |
| 1B | CB2100 Introduction to Financial Accounting | CB3410 Financial Management | MA1201 Calculus and Basic Linear Algebra II or MA1301 Enhanced Calculus and Linear Algebra II | CS2311 Computer Programming | CFN Stream Core CB2402 Macroeconomics | GE2402 English for Business Communication or EAP (Note 1) | |
| 2A | EF3320 Security Analysis and Portfolio Management | CS3402 Database Systems | CFN Stream Core MA2001 Multi-variable Calculus and Linear Algebra | College-specified course CS3334 Data Structures | GE1501 Chinese Civilization – History & Philosophy | GE1401 University English (for students taken EAP) | 2023 2024 |
| 2B | EF4313 Corporate Finance | MA2510 Probability and Statistics (3 credit units) | CFN Stream Core MA3511 Ordinary Differential Equations | CFN Stream Core MS3601 Optimization Methods | GE (Note 2) | GE2402 English for Business Communication (for students taken EAP) | |
| 3A | EF4321 Derivatives and Risk Management | MS3252 Regression Analysis | CFN Stream Core EF3520 Stochastic Calculus for Finance | CFN Stream Core MS2602 Statistical Inference | College-specified course MA3525 Elementary Numerical Methods | | 2024 2025 |
| 3B | CFN Stream Core EF4822 Financial Econometrics | CFN Stream Core EF4820 Derivatives Pricing I: Stock and FX | CFN Stream Core MS3111 Data Analytics with Excel VBA | GE (Note 2) | GE (Note 2) | | |
| 4A | CFN Stream Core EF4821 Derivatives Pricing II: Interest Rate and Credit Risk | CFN Stream Core CB4001 Honor Thesis (Sem A or B) | CFN Stream Elective 1 | Free Elective / Minor | Free Elective / Minor | | 2025 2026 |
| 4B | CFN Stream Core EF4328 Asset Management | CFN Stream Elective 2 | GE (Note 2) | Free Elective / Minor | Free Elective / Minor | | |

**Minimum Credits Required**

| | |
|---|---|
| GE: GE Area courses (12 CU) + College-specified courses (9 CU) | |
| GE: ENGL (6 CU) + CCIV (3 CU) | |
| College: College Core courses (9 CU) | |
| Major Core: 30 CU | |
| CFN Stream Core: 36 CU | |
| CFN Stream Elective: 6 CU | |
| Minor/Free Electives: 12 CU | |

**Min. No. of credit units: 123 CU**

**Max. No. of credit units: 144 CU**

☐ Individual Class

**Note:**

**(1) English Language Requirement:**
Students admitted with HKDSE English Level 3 or equivalent are required to complete two 3-credit EAP courses, LC0200A English for Academic Purposes 1 and LC0200B English for Academic Purposes 2, prior to taking the 2 GE English courses (GE1401 and GE2402).

*Note: Students who demonstrate that they have achieved a grade B or above in their overall course results for LC0200A will achieve 3 credits and also be considered to have satisfied the pre-requisite for entry to the GE English courses without needing to take LC0200B.*

**(2) Gateway Education Course Distributional Requirements**
Take at least 3 credits from each of the 3 areas:
Area 1: Arts and Humanities
Area 2: Study of Societies, Social and Business Organizations
Area 3: Science and Technology

**(3) Chinese Language Requirement**
Students scoring below Level 4 in HKDSE Chinese Language, or scoring below Grade D in HKALE AS-level Chinese Language and Culture are required to take a 3-credit unit course CHIN1001 University Chinese I.

**Stream Electives (6 credit units) : Students are required to take 2 courses from the following list:**

| | |
|---|---|
| CB2300 Management | EF4331 International Finance and Banking |
| CB3043 Business Case Analysis & Communication | EF4334 Regulation and Management of Financial Institutions |
| CS3391 Advanced Programming | MA3514 Numerical Methods for Differential Equations |
| CS4335 Design and Analysis of Algorithms # | MA4542 Real Analysis |
| EF4312 Mergers & Acquisitions | MS3106 Simulation |
| EF4314 Corporate Valuation | MS4212 Predictive Analytics & Forecasting |
| EF4323 Trading Room Workshop | MS4224 Enterprise Data Mining |
| EF4327 Fixed Income Securities | MS4252 Big Data Analytics |

# Subject to fulfilling the precursor requirement