

BSc Computational Finance and Financial Technology — Computational Finance Stream - 4 Year Structure (2024 Intake and thereafter)

Effective from Catalogue Term: Semester A 2024 / 2025

| 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 | <u>College-specified course</u> CB2240 Introduction to Business Programming in Python | GE1401 University English or EAP (Note 1) | Sem A or B CHIN1001 University Chinese I (Note 3) | 2024 2025 |
| 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 | <u>CFN Stream Core</u> CB2402 Macroeconomics | GE2402 English for Business Communication or EAP (Note 1) | |
| 2A | EF3320 Security Analysis and Portfolio Management | CS3402 Database Systems | <u>CFN Stream Core</u> MA2001 Multi-variable Calculus and Linear Algebra | <u>College-specified course</u> CS3334 Data Structures | GE1501 Chinese Civilization – History & Philosophy | GE1401 University English (for students taken EAP) | 2025 2026 |
| 2B | EF4313 Corporate Finance | MA2510 Probability and Statistics (3 credit units) | <u>CFN Stream Core</u> MA3511 Ordinary Differential Equations | <u>CFN Stream Core</u> MS3601 Optimization Methods | GE (Note 2) | GE2402 English for Business Communication (for students taken EAP) | |
| 3A | EF4321 Derivatives and Risk Management | MS3252 Regression Analysis | <u>CFN Stream Core</u> EF3520 Stochastic Calculus for Finance | <u>CFN Stream Core</u> MS2602 Statistical Inference | <u>College-specified course</u> MA3525 Elementary Numerical Methods | | 2026 2027 |
| 3B | <u>CFN Stream Core</u> EF4822 Financial Econometrics | <u>CFN Stream Core</u> EF4820 Derivatives Pricing I: Stock and FX | <u>CFN Stream Core</u> MS3111 Data Analytics with Excel VBA | GE (Note 2) | GE (Note 2) | | |
| 4A | <u>CFN Stream Core</u> EF4821 Derivatives Pricing II: Interest Rate and Credit Risk | <u>CFN Stream Core</u> CB4001 Honor Thesis (Sem A or B) | CFN Stream Elective 1 | Free Elective / Minor | Free Elective / Minor | | 2027 2028 |
| 4B | <u>CFN Stream Core</u> 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

This document is subject to change without prior notice.

Last Update: 15 Nov 2022

BSCCBU4 (CFFT) - ComFin-MA017