

# 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	<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)	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	<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)	2023 2024
2B	EF4313 Corporate Finance	MA2506 Probability and Statistics (4 credit units)	<u>CFN Stream Core</u> MA3001 Differential Equations	<u>CFN Stream Core</u> <b>MS3601</b> <b>Optimization Methods</b>	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> <b>EF3520</b> <b>Stochastic Calculus for Finance</b>	<u>CFN Stream Core</u> <b>MS2602</b> <b>Statistical Inference</b>	<u>College-specified course</u> MA3525 Elementary Numerical Methods		2024 2025
3B	<u>CFN Stream Core</u> <b>EF4822</b> <b>Financial Econometrics</b>	<u>CFN Stream Core</u> <b>EF4820</b> <b>Derivatives Pricing I: Stock and FX</b>	<u>CFN Stream Core</u> MS3111 Data Analytics with Excel VBA	GE (Note 2)	GE (Note 2)		
4A	<u>CFN Stream Core</u> <b>EF4821</b> <b>Derivatives Pricing II: Interest Rate and Credit Risk</b>	<u>CFN Stream Core</u> <b>CB4001</b> <b>Honor Thesis (Sem A or B)</b>	CFN Stream Elective 1	Free Elective / Minor	Free Elective / Minor		2025 2026
4B	<u>CFN Stream Core</u> <b>EF4328</b> <b>Asset Management</b>	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: 31 CU

CFN Stream Core: 36 CU

CFN Stream Elective: 6 CU

Minor/Free Electives: 12 CU

Min. No. of credit units: 124 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 Aug 2022

BSCCBU4 (CFFT) - ComFin-MA015