

Associate Fintech Professional (CPFinT(A))

Programme Handbook (Syllabus, Regulations and General Information)

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ECF-Fintech Introduction

1. Introduction

With the aim of supporting capacity building and talent development for banking professionals, the Hong Kong Monetary Authority (HKMA) has been working together with the banking industry to introduce an industry-wide competency framework - "Enhanced Competency Framework (ECF) for Banking Practitioners" in Hong Kong.

The Enhanced Competency Framework on Financial technology ("Fintech") (hereinafter referred to as "ECF-Fintech") was introduced to develop a sustainable pool for the banking industry. The qualification structure of the ECF-Fintech comprises two levels: Core Level and Professional Level, targeting entry level and junior level staff and staff taking up middle or senior positions in Fintech-related job roles.

As the programme and qualification provider of the ECF-Fintech, The Hong Kong Institute of Bankers (HKIB) has developed the learning programme – the "ECF-Fintech (Core Level)" to help individuals attain the Core Level of the competency standards set for the ECF-Fintech. The programme "ECF-Fintech (Professional Level)" helps individuals attain the Professional Level of the competency standards.

This Handbook provides programme details and relevant information for the learner who wants to complete the ECF-Fintech training and examination with the intent of obtaining the Professional Qualifications of "Associate Fintech Professional (CPFinT(A))".

For more details, please refer to the HKMA's Guide to Enhanced Competency Framework on Fintech at https://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circu-lar/2021/20211203e1.pdf and HKIB website at https://www.hkib.org/page/203.

ECF-Fintech Background

2. Background

2.1. Aims

The aims of the ECF-Fintech are twofold:

(i) To develop a sustainable Fintech talent pool for the banking industry; and

(ii) To raise and maintain the professional competence of Fintech practitioners in the banking industry.

2.2. Qualification Structure

The competency standards of the ECF-Fintech comprise two levels: Core Level and Professional Level.

Core Level - This level is applicable to entry level and junior level Fintech practitioners in Als.

Professional Level -This level is applicable to Fintech practitioners taking up middle or senior positions in Als. In order to more accurately reflect the different areas of expertise, this level is further divided into two tracks: Management Track and Specialist Track.

2.3. Scope of Application

The ECF-Fintech aims to develop an all-rounded Fintech competency framework to enhance the professional competencies of Fintech practitioners working in functions that involve technological innovation for financial services in the banking industry. Specifically, it is aimed at "Relevant Practitioners" located in the Hong Kong office of an Al whose primary responsibilities are to perform one or multiple job roles listed in the table below.

Background

Job Roles	Role Description (Core Level)	Role Description (Professional Level)		
Role 1 – Fintech Solution Devel- opment	Design, develop, test, and deliver the core functional and technical aspects of Fintech solutions for the Al. Work closely with crossfunctional teams, and coordinate projects on Fintech solutions throughout the software development lifecycle.	Provide expert advice on Fintech applications. Work with cross-functional teams to build and implement Fintech solutions for the Al.		
Role 2 – Fintech Product Design	Design and develop new Fintech products with innovative features and functionalities driven by user needs or market forces.	Oversee the design, development, and management of Fintech products and ensure products' alignment with the Al's overall Fintech strategic direction and product compliance.		
Role 3 – Fintech Strat- egy and Man- agement	Assist in the research and execution of Fintech strategy, and manage the Fintech initiatives of the Al in collaboration with internal stakeholders and external vendors and partners.	Drive Fintech agenda within the AI, and provide strategic direction for the AI's Fintech initiatives.		
Role 4 – Regtech	Assist in Regtech research, use case formulation, regulatory and business requirements consolidation, vendor selection and Regtech solution development, etc. along the Regtech adoption journey to enhance the efficiency and effectiveness of the Al's risk management and regulatory compliance.	Lead and drive the design, development and implementation of Regtech solutions and the change management to ensure alignment with the Al's overall Regtech strategy and realization of benefits of Regtech.		

For more details about the key tasks, please refer to Annex 1 of HKMA's Guide to Enhanced Competency Framework on Fintech at https://www.hkma.gov.hk/media/eng/doc/key-infor-mation/guidelines-and-circular/2021/20211203e1.pdf

Background

2.4. Certification and Public Register

There are six Professional Qualifications under the ECF-Fintech:

Core Level

Associate Fintech Professional (CPFinT(A))

A Relevant Practitioner may apply to HKIB for the professional qualification certification if he or she:

- (1) has completed all the four Core Level training modules (Modules 1 to 4) and obtained a pass in the relevant examination of each module plus 1 year of relevant work experience in Fintech projects and / or any of the Core Level functions in Fintech Solution Development, Fintech Product Design, Fintech Strategy and Management or Regtech as specified in "Annex 1 of HKMA's Guide to Enhanced Competency Framework on Fintech; or
- (2) Is grandfathered based on the required work experience upon the launch of the Core Level module and employed by an AI at the time of application.

Professional Level - Management Track

Certified Fintech Professional (Management) (CPFinT(M))

A Relevant Practitioner may apply to HKIB for professional qualification certification if he or she:

- (1) has completed Module 5, Module 9, and Module 10 of the ECF-Fintech Professional Level training programme and obtained a pass in the relevant examination of each module on top of the Core Level qualification plus at least 3 years of relevant work experience in Fintech projects and/or any of Professional Level functions in Fintech Solution Development, Fintech Product Design, Fintech Strategy and Management or Regtech as specified in "Annex 1 of HKMA's Guide to ECF-Fintech"; or
- (2) is grandfathered based on the required work experience upon the launch of the Professional Level module and employed by an AI at the time of application.

Professional Level - Specialist Track

Certified Fintech Professional (Specialist - AI & Big Data Stream) (CPFinT(S-AIBD))

Certified Fintech Professional (Specialist - Distributed Ledger Technology Stream) (CPFinT(S-DLT))

Certified Fintech Professional (Specialist - Open Banking and API Stream) (CPFinT(S-OBAPI))

ECF-Fintech Background

Certified Fintech Professional (Specialist - Regtech Stream) (CPFinT(S-RT)

A Relevant Practitioner may apply to HKIB for professional qualification certification if he or she:

- (1) has completed Module 5 and <u>one of the following modules</u> for fulfilling the technical specialist stream of the Professional Level training programme and obtained a pass in the examination of the relevant modules on top of the Core Level qualification plus at least 3 years of relevant work experience in Fintech projects and/or any of the Professional Level functions in Fintech Solution Development, Fintech Product Design, Fintech Strategy and Management or Regtech as specified in "Annex 1 of HKMA's Guide to Enhanced Competency Framework on Fintech":
 - Module 6 for AI and Big Data stream
 - Module 7 for Distributed Ledger Technology stream
 - Module 8 for Open Banking and API stream
 - Module 11 for Regtech stream

or

(2) is grandfathered based on the required work experience upon the launch of the Professional Level module and employed by an AI at the time of application.

For details regarding grandfathering requirements, please refer to <u>HKIB website</u> and HKMA's Guide to Enhanced Competency Framework on Fintech.

By going through HKIB certification process successfully, the respective certification holders are then registered as Certified Individuals (CI) and included in the public register on HKIB website. HKIB will also grant the certification holders a professional membership of HKIB.

2.5. Annual renewal of certification and CPD Requirements

The ECF-Fintech certifications are subject to annual renewal by HKIB. Certification holders are required to meet the annual Continuing Professional Development (CPD) requirements and pay an annual certification fee to renew the certification.

For both the Core Level and Professional Level qualifications, a minimum of 12 CPD hours is required for each calendar year, of which at least 4 CPD hours should be on topics related to innovative technology (e.g. artificial intelligence, big data, cloud computing,

ECF-Fintech Background

cybersecurity, distributed ledger technology, and/or open banking and API), product development, business strategy and marketing, finance and investment, and/or risk and compliance.

Any excess CPD hours accumulated within a particular year cannot be carried forward to the following year.

No CPD is required in the first calendar year when above certification(s) is granted. The CPD requirement starts in the following calendar year.

3. ECF-Fintech (Core Level) Programme Overview

3.1. Entry Requirements

The Programme is open to members and non-members of HKIB. Learners must fulfil the stipulated minimum entry requirements:

- A Bachelor's Degree in any discipline awarded by a recognised university or equivalent; or
- An Associate Degree (AD) / Higher Diploma (HD) in a banking, finance, technology or related discipline or equivalent; or
- A relevant professional qualification; or
- Mature applicants with 3 years of relevant banking experience with recommendations from employer

Remarks:

- 1. 3rd or final year full-time university undergraduate students in a banking, finance, technology or related discipline will be considered.
- 2. Mature applicants (aged 21 or above) who do not possess the above academic qualifications but with relevant banking experience and recommendation from their employers will be considered on individual merit.

3.2. Programme Objectives

This programme is developed to nurture a broad and sustainable talent pool of entry level and junior level Fintech practitioners for the banking industry. Learners will be equipped with professional knowledge and technical expertise to better respond to innovative financial and technological trends.

3.3. Programme Intended Learning Outcomes

Upon completion of the programme, learners should be able to:

- Acquire the key aspects of Fintech application in banking and financial services.
- Demonstrate in-depth knowledge of the legal and regulatory framework for Fintech governing banking and financial services in Hong Kong.
- Acquire essential knowledge of the financial system, banking products and services.
- Integrate and apply Fintech skills and knowledge to tackle banking and financial services industry challenges and develop practical recommendations or solutions.
- Analyse latest digital developments in Hong Kong and overseas and identify new opportunities for Fintech innovation in banking products, services, and platform.
- Apply the essential principles and industry standards to support the design, development, and promotion of Fintech solutions.

3.4. Learning Hours

The Programme is comprised of the following 4 modules, accumulating a total of 80 credits.

Module 1: Technology Essentials (20 credits)

Module 2: Banking and Risk Essentials (20 credits)

Module 3: Fintech Practicum (20 credits)

Module 4: Fundamental Fintech Tools and Applications (20 credits)

The programme design adopts a blended learning approach. Learners are advised to spend no less than 800 Learning Hours (equivalent to 80 credits). Learning time refers to the amount of time an average learner is expected to take to complete all learning pertaining to the programme and achieve the learning outcomes expected. It includes time spent on all learning modes and activities such as training classes, self-study and assessment hours.

4. Learning Support

4.1 HKIB Resources Corner Support

The Resources Corner situated at the premises of HKIB provides the required learning resources required for study. Copies of the Recommended Readings are available in the Corner for borrowing. To provide updated learning resources to the members, HKIB has provided FREE internet and library services to the members.

Learners are encouraged to prepare for the examination by acquiring relevant market information and module knowledge through various channels, e.g. reference readings, business journals, websites, etc. Learners should be aware that such market information may be important and pertinent to the examination.

4.2 Market Information Updates

HKIB regularly organises training courses, seminars and luncheon talks on current issues and developments in financial markets that candidates may find essential, helpful and relevant to their learning.

For more details, please refer to **HKIB** website

Programme Syllabus 5.

5.1 Module 1: Technology Essentials

A. **Module Objective**

The module aims to introduce emerging financial and regulatory technologies, including artificial intelligence (AI), big data analytics, distributed ledger technology (DLT), cloud computing, open banking and API, Robotic Process Automation (RPA) and cybersecurity; to introduce Fintech trends, key disruption events in the banking industry and the impact of Fintech developments on banking industry operations; and to introduce local and overseas Fintech applications, use cases and the corresponding implications in the banking space.

B. Module Intended Learning Outcome

Upon completion of this module, learners should be able to:

- Analyse, evaluate and apply the fundamental technical concepts and principles of emerging Fintech topics to assist in Fintech solution development.
- Identify the recent and emerging Fintech trends and developments and common Fintech applications in banks.

C. Syllabus

Chapte	er 1	: Introduction to Financial Technology (Fintech) and Regtech
1	-	Introduction of emerging financial and regulatory technologies
2	-	Key concepts and principles of artificial intelligence
3	-	Key concepts and principles of big data analytics
4	-	Key concepts and principles of distributed ledger technology (DLT)
5	-	Key concepts and principles of cloud computing
6	-	Key concepts and principles of open banking & API
7	-	Key concepts and principles of Robotic Process Automation (PRA)
8	-	Key concepts and principles of cybersecurity
Chapte	er 2	2: Fintech Trends and Developments
1	-	Recent Key Disruptive Events in Banking

- 2
 - Fintech Development to enhance the Banking Operations and Customer Experience
 - **Customer Experience and Centricity**
 - Digital Product Services Development
 - Operation Efficiency Enhancement
 - Change Management

Chapter 3: Common Fintech Applications in Banks

- 1 Local and overseas Fintech applications
- 2 Use-cases of the following technologies, including
 - Virtual assistant
 - Credit scoring
 - · Authentication and biometrics
 - Remote onboarding

D. Recommended Readings

Essential Readings

- 1. Rubini, Agustin (2018). Fintech in a Flash: Financial Technology Made Easy. De G PRESS.
- 2. Mohan, D. (2020). The Financial Services Guide to Fintech: Driving Banking Innovation Through Effective Partnerships. Kogan Page. (Chapter 1, 2, 7 and 10).
- 3. Mills, Karen G. (2018). Fintech, Small Business & the American Dream: How Technology Is Transforming Lending and Shaping a New Era of Small Business Opportunity. Springer.

Supplementary Readings

- 1. Tanda, Alessandra & Schena, Cristiana-Maria (2020). FinTech, BigTech and banks: digitalisation and its impact on banking business models. Palgrave Pivot.
- 2. Tanda, A., & Schena, C. M. (2019). FinTech, BigTech and Banks. Springer Publishing.
- 3. Loesch, Stefan (2018). A Guide to Financial Regulation for Fintech Entrepreneurs. Wiley.

Further Readings

- 1. Anderson, Ross (2020). Security Engineering: A Guide to Building Dependable Distributed Systems. Wiley.
- Benedict J. Drasch, André Schweizer and Nils Urbach. (2018) Integrating the 'Trouble-makers': A taxonomy for cooperation between banks and fintechs. Journal of Economics and Business. Volume 100, November–December 2018, Pages 26-42. DOI: 10.1016/j.jeconbus.2018.04.002.
- 3. Valverde, Dantiago Carbo & Fernandez, Francisco Rodriguez (2020). Financial digitalization: Banks, Fintech, Bigtech, and consumers. Journal of Financial Management, Markets and Institutions, 08(01), 2040001.
- 4. The Hong Kong Monetary Authority (2019). Reshaping Banking with Artificial Intelligence.
- 5. Brett King (2018). Bank 4.0: Banking Everywhere, Never at a Bank. Wiley.

5.2 Module 2: Banking and Risk Essentials

A. Module Objective

The module aims to enable learners a clear understanding of corporate, institutional, commercial, and retail banking and articulate the offerings and distinction of different banking sectors; to provide learners knowledge of products and services, and respective banking functions and operations supports; to provide learners a clear picture of contemporary banking developments and local talent expectations, including local and international Fintech initiatives; to enhance learners' knowledge and understanding on risk management framework and methodologies, regulatory framework landscape, Regtech application and development.

B. Module Intended Learning Outcome

Upon completion of this module, learners should be able to:

- Differentiate between different banking product offerings and study the differences between retail banking, commercial banking, corporate banking, and institutional banking.
- Recognise expectations for competency of local Fintech talent and stay up-to-date on banking Fintech developments and adopt local and international Fintech regulations and government initiatives.

C. Syllabus

Chapt	er 1: Retail and Commercial Banking (Fintech-related applications)
1	- Fundamentals of retail and commercial banking
	Key offering of a universal bank
	Key business aspects covering by retail and commercial Banking
2	- Local market landscape
	Critical factors to Retail Banking and Commercial Banking
	Business size of authorized institution
	Market Size of SMEs in Hong Kong
3	- Customer Segmentation
	Retail Banking
	Commercial Banking
4	- Channel Management
5	- Retail and SME Credit assessments
	Retail Banking Credit Assessments

	Commercial Banking Credit Assessments					
6	Summary					
Chapt	er 2: Corporate and Institutional Banking					
1	- Fundamentals of corporate and institutional banking					
	Overview					
	Client Segments					
	Products					
	Corporate Lending					
2	- Customer relationship management					
	Definition and Framework					
	Key Elements for Successful CRM					
	Roles and Responsibilities of Relationship Managers					
	Other Key Parties					
	CRM under the Digital World					
3	- Transaction banking and securities services					
	Trade Finance					
	Cash Management and Account Services					
	Securities Services					
_	Key Areas of Concern and Opportunities in Transaction Banking					
4	- Financial markets and treasury advisory					
	Money Markets					
	Fixed Income, Currencies and Commodities					
	• Equities					
	Treasury Advisory Key Areas of Concern and Opportunities in Finance Markets					
_	Key Areas of Concern and Opportunities in Finance Markets Corporate finance and others					
5	- Corporate finance and others					
	Debt Capital MarketsEquity Capital Markets					
	Project Finance					
	M&A and Corporate Advisory					
	Key Areas of Concern and Opportunities in Corporate Finance					
	Other Corporate and Institutional Banking Services					
	Collaboration with Other Banking Sectors					
Chapt	er 3: Contemporary Banking Trends					
1	- Smart Banking Initiatives					
	Faster Payment System					
	Enhanced Fintech Supervisory Sandbox					
	Promotion of Virtual Banking					
	Banking Made Easy initiative					

	Onen Application Programming Interface
	Open Application Programming Interface
	Closer cross-border collaboration
	Enhanced research and talent development
2	- Faster Payment System (FPS)
	Features
	Benefits to Consumer
	Benefits to Merchants and Corporates
3	- Enhanced Fintech Supervisory Sandbox (FSS) 2.0
	Objectives
	Features
	• Usage
4	- Promotion of Virtual Banking
	Selection Criteria of VB Application
	VB Supervisory Approach
	Key Risk Areas
	New Personal Credit Products
5	- Banking Made Easy Initiative
	Remote Customer Onboarding
	Online Finance
	Online Investment
	Anti-Money Laundering & Counter-Financing of Terrorism
	Regtech for prudential risk management and compliance
	Machine-readable regulations
6	- Open Application Programming Interface (API)
	Implementation Approach
	Adoption Status of Commercial Banking
	Benefits
	Challenges
	Essential practices for Phase III and IV implementation
7	- Cross-border collaboration
	Collaboration in Guangdong-Hong Kong-Macau Bay Area
	Central Bank Digital Currencies
	Collaboration with Singapore
	Project LionRock-Inthanon
	Bank of International Settlements Innovation Hub Hong Kong Centre
	Global Financial Innovation Network Cross-Border Testing
8	- Talent Development Programme
	Fintech Career Accelerator Scheme
	Industry Project Masters Network Scheme
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	Enhanced Competency Framework
9	- Financial intermediation
	Definition of Financial Intermediation
	Strategies of Financial Intermediation
	Latest development of Financial Intermediation in Hong Kong
10	- Summary
	er 4: Risk Management and Regulatory Compliance
_	
1	- Overview of Risk Management in Banking
	Introduction to Risk Management
	Enterprise Risk Management
	Importance of Risk Management in Banks
	Big Losses of Financial Institutions
	Risk Management Framework
2	- Tools and Measures in Risk Management
	Value-at-Risk (VaR)
	Advantages/Drawbacks of VaR
	Expected Shortfall (ES)
	Coherent Risk Measures
	Back-Testing
	Scenario Analysis and Stress Testing
	Scenario Design
	Reverse Stress Testing
	Regulation on Stress Testing
	Economic Capital
	Risk-adjusted Return on Capital (RAROC)
3	- International Regulatory Framework: Basel III Standards and Trend of De-
	velopment in FinTech Regulation Landscape
	Importance of Regulating Banks
	Introduction to BASEL
	BASEL III
	Capital Definition & Requirements
	Capital Conservation Buffer
	Countercyclical Buffer
	Leverage Ratio
	Liquidity Ratios
	Capital for CVA Risk
	• G-SIBs
	• D-SIBs

FinTech Regulations: Current State in Hong Kong

4

- Evolving Regulatory Landscape on Other Jurisdictions
 - RegTech: Overview and Emerging Trend of Development
 - Introduction to RegTech
 - Evolution of RegTech
 - Importance of RegTech to the Banking Industry
 - · RegTech's Underlying Technologies
 - RegTech's Application Areas
 - RegTech: Current State and Government Initiatives
 - RegTech Adoption in Hong Kong: Opportunities and Challenges
 - Case Studies and Insights: RegTech Applications in Banks
 - SupTech and HKMA's Adoption of SupTech
 - Future of RegTech

D. Recommended Readings

Essential Readings

1. John C. Hull. (2018). Risk Management and Financial Institutions Fifth Edition. Wiley

Supplementary Readings

- 1. Tata, F. (2020). Corporate and investment banking: Preparing for a career in sales, trading, and research in global markets. Springer Nature
- 2. Walker, T., & Morris, L. (2021). The handbook of banking technology. Wiley
- 3. Boston Consultant Group. (2018). Redefining corporate client relationships in a digital world.
- 4. Deloitte. (2017). Modernizing transaction banking: Service externalization and the right technology portfolio.
- 5. Guo, Y. (2017). Implementing relationship banking strategies and techniques and improving customer value. Finance and Market, 2(2).
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- 8. Hong Kong Monetary Authority. (2021, February 23). Joint statement on the multiple central bank digital currency (m-CBDC) bridge project.
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- 16. Guide, A. B. I. C. (2012). Customer Management in SME Banking.
- 17. HK Financial Services Development Council (2020). Family Wisdom: A Family Office Hub in Hong Kong.
- 18. Hong Kong Monetary Authority (2001). Sharing of Consumer Credit Data through a Credit Reference Agency.
- 19. Hong Kong Monetary Authority (2002). Best Practices for Credit Card Operations.
- 20. Hong Kong Monetary Authority (2021). HKMA Monthly Statistical Bulletin (July 2021).
- 21. International Finance Corporation (2009). The SME Banking Knowledge Guide.
- 22. International Finance Corporation (2012). Customer Management in SME Banking: A Best-in-Class Guide.
- 23. Quinlan and Associates. (March 2021). Branching Off.
- 24. Rogers, Martha; Peppers, Don. (2016). Differentiating Customers by Their Needs. In Managing Customer Relationships (pp. 187–215). John Wiley & Sons, Inc.
- 25. Rogers, Martha; Peppers, Don. (2016). Differentiating Customers by Their Needs. In Managing Customer Relationships (pp. 187–215). John Wiley & Sons, Inc.
- 26. Securities and Futures Commission. (2021). Asset and Wealth Management Activities Survey 2020.
- 27. Trade and Industry Department, The Government of HK SAR. (2021). Small and medium enterprises (SMEs).
- 28. W.Up. (2018). Segments of One: Customer Insights in Digital Marketing.
- 29. Walker, T., & Morris, L. (2021). The Handbook of Banking Technology. John Wiley & Sons.
- 30. Bodea, T., & Ferguson, M. (2014). The Ideas Behind Customer Segmentation. In Segmentation, Revenue Management and Pricing Analytics (pp. 11–17). Routledge.
- 31. Albastaki, & Albastaki, Yousif. (2021). Innovative strategies for implementing FinTech in banking. Business Science Reference.
- 32. Accenture (2020). The Next Phase of the Banking Open API Journey.
- 33. Bank for International Settlements (2020). Rise of the central bank digital currencies: drivers, approaches and technologies.

- 34. Banking Ordinance, Authorization of Virtual Banks A Guideline issued by the Monetary Authority under Section 16(10).
- 35. Beck, H. (2001). Banking is essential, banks are not. The future of financial intermediation in the age of the Internet. Netnomics, 3(1), 7-22.
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- 38. Europe Banking Association (2017). Open Banking: advancing customer-centricity
- 39. Farrow, G. S. (2020). An application programming interface model for open banking ecosystems. Journal of Payments Strategy & Systems, 14(1), 75-91.
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- 41. GFIN Report (2019).
- 42. Greenbaum, Thakor, Boot, Thakor, Anjan V, & Boot, Arnoud W. A. (2020). Contemporary financial intermediation. (Fourth edition / Stuart I. Greenbaum, Anjan V. Thakor, Arnoud W.A. Boot.). Academic Press.
- 43. Hong Kong Interbank Clearing Limited (HKICL).
- 44. HKMA (2020). International Financial Centre.
- 45. HKMA Banking Made Easy Initiative.
- 46. HKMA Circular B1/15C B9/29C, Fintech Supervisory Sandbox (FSS).
- 47. HKMA Circular B10/1C B1/15C, Remote on-boarding of corporate customers.
- 48. HKMA Circular B10/1C B1/15C, Remote on-boarding and iAM Smart.
- 49. HKMA Closer Cross-border Collaboration.
- 50. HKMA Enhanced Competency Framework.
- 51. HKMA Fintech Supervisory Sandbox.
- 52. HKMA Fintech Career Accelerator Scheme (FCAS) Gap Year Placement Programme.
- 53. HKMA Insights (2020). Wealth Management Connect Scheme in the Greater Bay Area.
- 54. HKMA Insight (2021). New Personal Credit Products by Virtual Banks.
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- 56. HKMA Press Releases (2017). Latest Development on the Era of Smart Banking.
- 57. HKMA Press Releases (2018). FPS New Account Proxy -HKID Number.
- 58. HKMA Press Releases (2018). Application of Financial Technology in Personal Lending Business.
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- 62. HKMA Press Releases (2021). HKMA Promulgates Implementation Details for Cross-boundary Wealth Management Connect Pilot Scheme in the Guangdong-Hong Kong-Macao Greater Bay Area.

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- 64. HKMA Regtech Watch Issue No. 3 (2020).
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- 70. KPMG (2020). Transforming Risk Management and Compliance: Harnessing the Power of Regtech.
- 71. KPMG (2021). Regtech Adoption Practice Guide, Issue #2: Anti-Money Launder-ing/Counter-Financing of Terrorism.
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- 81. Hong Kong Monetary Authority (HKMA) (2017, Oct 06) Supervisory Policy Manual IC-1. Risk Management Framework.
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- 83. Hong Kong Monetary Authority (HKMA) (2020, Nov). Transforming Risk Management and Compliance: Harnessing the Power of Regtech.
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- 92. Hong Kong Monetary Authority (HKMA) (2021, Jun 17). Seventh and Final Issue of Regtech Watch.
- 93. Hong Kong Monetary Authority (HKMA) (2021, Jun). First Issue of Regtech Adoption Practice Guide: Cloud-based Regtech Solutions.
- 94. Hong Kong Monetary Authority (HKMA) (2021, Jul 26). Second Issue of Regtech Adoption Practice Guide: Anti-Money Laundering/Counter-Financing of Terrorism.
- 95. Hong Kong Monetary Authority (HKMA) (2021, Sep 27). Third Issue of Regtech Adoption Practice Guide: Governance, Risk and Compliance.
- 96. Hong Kong Monetary Authority (HKMA) (2021, Jun 08). HKMA Unveils "Fintech 2025" Strategy.
- 97. Hong Kong Monetary Authority (HKMA) (2021, Jun 17). HKMA launches the Regtech Adoption Practice Guide series.
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- 101. Barberis J., Arner D., Buckley R. (2019). The RegTech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries in Regulation. Wiley.
- 102. Arner D. W., Barberis J., and Buckley R. P. (2017) FinTech, RegTech and the Reconceptualization of Financial Regulation. Northwestern Journal of International Law & Business Vol. 37 Issue 3.

Further Readings

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- 2. Hong Kong Monetary Authority & Bank of Thailand. (2020, January). Inthanon-LionRock Leveraging Distributed Ledger Technology to Increase Efficiency in Cross-Border Payments.
- 3. Hong Kong Monetary Authority (2021, July 29). Supervisory policy manual: CR-G-5, CR-G-8, AML-1, AML-2.
- 4. World Economic Forum. (2021, May 6). Digital Assets, Distributed Ledger Technology, and the Future of Capital Markets.
- 5. Hong Kong Monetary Authority (HKMA) (2021, Apr 23) Supervisory Policy Manual CA-

- B-2. Systemically Important Banks.
- 6. Hong Kong Monetary Authority (HKMA) (2018, Oct 19) Supervisory Policy Manual AML-1. Supervisory approach on Anti-Money Laundering and Counter-Financing of Terrorism.
- 7. Hong Kong Monetary Authority (HKMA) (2018, Oct 19) Supervisory Policy Manual AML-2. Guideline on Anti-Money Laundering and Counter-Financing of Terrorism.
- 8. Hong Kong Monetary Authority (HKMA) (2012, May 09) Supervisory Policy Manual IC-5. Stress-testing.
- 9. Basel Committee on Banking Supervision (BCBS). (2011, Jun) Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems.

5.3 Module 3: Fintech Practicum

A. Module Objective

The module aims to introduce the basic concepts, methods, and approaches of data analytics in Fintech with various quantitative analysis techniques in developing analytical data models to support decision-making; to introduce the latest trend of technologies adoption, customers centric and testing methodologies in design and development of Fintech products in banking related services; to provide learners the fundamentals on Fintech project management and reporting, and equips students with knowledge and skills needed for the management of the processes, risks and compliance issues on the Fintech transformation project in Hong Kong.

B. Module Intended Learning Outcome

Upon completion of this module, learners should be able to:

- Conduct business analytics, milestone monitoring, and stakeholder communication for Fintech projects.
- Apply the essential principles and industry standards of Fintech product design and development cycle fundamentals, including methodology selection and criteria evaluation.

C.

Syllal	bus	
Chap	oter	1: Business Analysis for Fintech Projects
1	-	Problem framing: Using Accounting and Finance Data to Frame Questions
2	-	Master the Data: An Introduction to Accounting and Finance Data
3	-	Master the Data: Preparing the Data for Analysis
4	-	Perform the Analysis: Descriptive Analytics
5	-	Perform the Analysis: Diagnostic Analytics
6	-	Perform the Analysis: Predictive Analytics
7	-	Perform the Analysis: Prescriptive Analytics
8	-	Communicate the Results: Data Visualization and Report
Chap	oter	2: Fintech Product Design and Development
1	-	Fintech development in banking industry
		The Bali Fintech Agenda of World Bank/IMF, and FinTech development in
		bank
2	-	New Technologies adopted in Fintech applications
		 Basics of the advanced technologies (Technology Sensing/ biometrics,
		AI/ML, Big Data, NLP, Blockchain)
		 Applications of the advanced technologies in banking products
		Lab: Basics of Blockchain technology and how payments are transacted on
		Blockchain (Eth.build sandbox)
3	-	Fintech product design
		Digital services in banking
		Design essentials of fintech products
		Introduction of Systems architecture
		 Lab: UX design of an application mock-up (pencil project)
4	-	Fintech product development
		Product development Tools
		Development & User Research strategies
		Testing Methodologies and Strategy
Chap	oter	3: Fintech Project Management and Reporting
1	-	Fundamentals of fintech project management

1		-	Func	lament	als	of	fini	ech	proj	ect	mana	agen	nen	Ĺ
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- Overview
- Linkage with Product Management
- System for Value Delivery
- Fintech Project Management Principles
- Fintech Project Performance Domains

	Fintech Project Development Approaches
2	- Stakeholder management
	Stakeholder Management Framework
	Stakeholder Engagement Steps
	Stakeholder Communication
	Stakeholder Satisfaction Measurement
	Key Stakeholder - Customers
	Key Stakeholder - Regulators
	Key Stakeholder - Fintech Project Team
3	- Cross-functional coordination
	Planning
	Project Work
	• Delivery
	Measurement and Reporting
4	- Agile methodologies
	Agile Manifesto and 12 Principles
	Agile Methodologies Overview
	• Lean
	Kanban
	• Scrum
	eXtreme Programming
	Other Agile Methodologies
5	- Contemporary cases and issues on fintech project management
	Selection of Approaches/ Models
	Selection of Approaches - The APP Case
	Managing Uncertainties and Risks
	Fintech Project Failure - The ABC Case

D. Recommended Readings

Essential Readings

1. Project Management Institute. (2021). A guide to the project management body of knowledge (PMBOK® Guide) and the standard for project management (7th ed.). Project Management Institute.

Supplementary Readings

 Richardson, Teeter & Terrell, McGraw-Hill (2019). Data Analytics for Accounting. McGraw Hill.

- 2. Richardson, Teeter & Terrell, McGraw-Hill (2020). Introduction to Data Analytics for Accounting. McGraw Hill.
- 3. Yousif Abdullatif Albastaki, Anjum Razzaque, Adel M. Sarea (2020), Innovative Strategies for Implementing FinTech in Banking. IGI Global.
- 4. OECD. (2020, 26 February). Digital Disruption in financial markets. https://www.oecd.org/daf/competition/digital-disruption-in-financial-markets.htm
- World Bank (2020, April). Digital Financial Services.
 https://pubdocs.worldbank.org/en/230281588169110691/Digital-Financial-Services.pdf
- World Bank (October 11, 2018). The Bali Fintech Agenda: A blueprint for successfully harnessing Fintech's opportunities.
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- 13. Hobbs, B. & Petit, Y. (2017). Agile methods on large projects in large organizations. Project Management Journal, 48(3), 3–19.
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- 15. Jinasena, D. N., Spanaki, K., Papadopoulos, T., & Balta, M. E. (2020). Success and failure retrospectives of fintech projects: A case study approach. Information Systems Frontiers, 1-16.
- 16. Recker, J., Holton, R., Hummel, M., & Rosenkranz, C. (2017). How agile practices impact customer responsiveness and development success: A field study. Project Management Journal, 48(2), 99–121.
- 17. Tereso, A., Ribeiro, P., Fernandes, G., Loureiro, I., & Ferreira, M. (2019). Project management practices in private organizations. Project Management Journal, 50, 6–22.

Further Readings

- 1. Gemino, A., Reich, B. H., & Serrador, P. M. (2021). Agile, Traditional, and Hybrid Approaches to Project Success: Is Hybrid a Poor Second Choice? Project Management Journal, 52, 161–175.
- 2. Global Financial Innovation Network (2019). GFiN one year on: The global financial innovation network reflects on its first year.
- 3. Global Financial Innovation Network (2020). GFiN cross-border testing lessons learned: The global financial innovation network reflects on the cross-border testing pilot.
- 4. Liu, J. Y.-C. & Yuliani, A. R. (2016). Differences between clients' and vendors' perceptions of IT outsourcing risks: project partnering as the mitigation approach. Project Management Journal, 47(1), 45–58.

5.4 Module 4: Fundamental Fintech Tools and Applications

A. Module Objective

The module aims to introduce the fundamentals of Machine Learning, Artificial Intelligence, and data analytics with hands-on Natural Language Processing (NLP) and deep learning applications using well-known tools; to introduce cloud computing concepts, services, underlying technologies, charges and budgeting, and provides hands-on experience on container deployment and orchestration to launch business applications; to introduce the concepts and applications of the blockchain technology by covering major blockchains solutions/framework and the architecture of blockchain-based applications.

B. Module Intended Learning Outcome

Upon completion of this module, learners should be able to:

- Understand the fundamental concepts of financial technologies (i.e. artificial intelligence, data analytics, cloud computing and blockchain technologies) for Fintech applications in the banking industry.
- Apply appropriate tools, frameworks, programming techniques and services space of financial technologies in various use cases in the banking industry.

C. Syllabus

Chapte	er 1	: Tools and Applications for Artificial Intelligence and Big Data
		Analytics
1	-	History and Definition of terminologies.
2	-	General framework/steps to perform data analytics.
3	-	Machine learning algorithms and evaluation metrics.
4	-	Current Development Trend (NLP & Deep Learning/ Pattern Recognition, Bi-
		ometric Authentication) with use cases and applications such as news analy-
		sis, time series data analysis.
Chapte	er 2	Tools and Applications for Cloud Computing
1	-	Cloud computing as a paradigm
2	-	Key enabling technologies
3	-	Service models and types of clouds
4	-	Virtualization, containers and orchestration
5	-	Serverless technologies
6	-	Charges and budgeting
7	-	Cloud and FinTech
Chapte	er 3	: Tools and Applications for Blockchain and Distributed Ledger
		Technology
1	-	What is Blockchain?
2	-	Cryptocurrency and other applications of Blockchain
3	-	Major Blockchain Solutions/Frameworks for Application Development
4	-	Application development using Hyperledger Fabric
5	-	Introduction of the team structure/organization of personnel for adopting
		Fintech to plan/design/implement banking products/services

D. Recommended Readings

Essential Readings

- 1. McKinney, Wes (2017). Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython. O'Reilly Media.
- 2. Pandas. https://pandas.pydata.org/docs/getting_started/index.html
- 3. Kaggle https://www.kaggle.com/
- 4. Armbrust et al (2009). Above the Clouds: A Berkeley View of Cloud Computing. 25 pages. https://www2.eecs.berkeley.edu/Pubs/TechRpts/2009/EECS-2009-28.pdf
- 5. Vitualization Overview White Paper. 11 pages. https://www.vmware.com/pdf/virtualization.pdf. Vmware.
- 6. Cloudflare. What is the cloud?

- https://www.cloudflare.com/learning/cloud/what-is-the-cloud/. Cloudflare Inc.
- 7. Surianarayanan, Chellammal & Pethuru Raj Chelliah (2019). Essentials of Cloud Computing: A Holistic Perspective. Springer Nature.
- 8. Androulaki, E., Barger, A., Bortnikov, V., Cachin, C., Christidis, K., De Caro, A., Enyeart, D., Ferris, C., Laventman, G., Manevich, Y., Muralidharan, S., Murthy, C., Nguyen, B., Sethi, M., Singh, G., Smith, K., Sorniotti, A., Stathakopoulou, C., Vukolić, M., ... Yellick, J. (2018). Hyperledger fabric. Proceedings of the Thirteenth EuroSys Conference. https://doi.org/10.1145/3190508.3190538

Supplementary Readings

- Stanfordonline. (2019, March 11). Stanford CS224N: NLP with Deep Learning https://www.youtube.com/watch?v=8rXD5xhemo&list=PLoROMvodv4rOh-cuXMZkNm7j3fVwBBY42z Youtube.
- Ng, A. Machine learning.
 https://www.coursera.org/learn/machine-learning Stanford Online, Coursera
- Barroso, Luiz Andre & Holzle, Urs (2009). The Datacenter as a Computer, An Introduction to the Design of Warehouse-Scale Machines
 https://www.morganclaypool.com/doi/pdf/10.2200/S00193ED1V01Y200905CAC006
 Morgan & Claypool Publishers.
- 4. The Linux Foundation. (2021). Blockchain: Understanding Its Uses and Implications https://www.edx.org/course/blockchain-understanding-its-uses-and-implications
- 5. Murthy, M. (2018, April 18). Life cycle of an Ethereum transaction https://medium.com/blockchannel/life-cycle-of-an-ethereum-transaction-e5c66bae0f6e
- 6. Corda. (2020, July 30). What is Corda? https://www.corda.net/blog/what-is-corda/

Further Readings

- Stanfordonline. (2019, March 21). Stanford CS230: Deep Learning https://www.youtube.com/watch?v=PySo_6S4ZAg&list=PLoROMvodv4rOA-BXSygHTsbvUz4G_YQhOb_YouTube.
- 2. Geron, Aurelien (2019). Hands-On Machine Learning with Scikit-Learn Keras, and TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems. O'Reilly Media
- 3. Turnbull, James (2014). The Docker Book: Containerization is the new virtualization. James Turnbull
- 4. Amazon Financial Services https://aws.amazon.com/financial-services/
- 5. Zastrin (2021). Ethereum Primer. https://www.zastrin.com/courses/ethereum-primer/lessons/1-1

6. Training Application

A. Training Schedule

For the latest information about the training application period and class schedules, please contact HKIB staff or refer to HKIB website at https://www.hkib.org/page/203.

B. Training Duration

The training durations of Core Level are set out as follows:

Training Mode	Lecture
	Module 1 – 9 Hours
Training Duration*	Module 2 – 15 Hours
Training Duration*	Module 3 – 15 Hours
	Module 4 – 21 Hours

C. Training Application

Applicants can submit the application via the electronic application form in HKIB webpage. Attention should be paid to the application deadline as a late entry fee may be charged.

Application Requirements:

- The information provided for the training enrolment must be true and clear.
- Inaccurate or incomplete applications may not be accepted even if the applicant has paid the training fee.
- HKIB reserves the right to reject late applications and/or any applications deemed inappropriate. Once HKIB has received an application form, NO alterations to the training arrangement are allowed. HKIB reserves the right to change training dates and application deadlines at any time.
- Applicants are advised to retain a copy of the completed application form for their own records.

D. Training Fee and Payment

Module	Training Fee (HKD) *
1	5,400
2	6,700
3	6,700
4	8,000

- * A digital version of training material (e.g. Study Guide and / or PPT Slides) will be provided before training commencement.. In addition, learners have to purchase reference books, where applicable, at their own expense as a part of the essential readings. For details, please refer to the essential reading list in the Programme Handbook under each module.
- Applicants should pay the training fee as follows:
 - (a) By credit card. Please provide your credit card information on the application form.
 - (b) By FPS payment. Please provide your FPS payment receipt.
- Application forms without payment instructions will NOT be processed.
- All payments must be settled before the start of the programme. NO fees are refunded or transferred under any circumstances.
- Applicants are advised to keep a record of their payment.
- Confirmation of training application is sent to applicants via email at least 5 working days prior to the training date.
- Late training enrolment will be accepted after the stipulated application deadline up to 7 days before course commencement to allow us to administer the application. A late entry fee of HKD200 (in addition to the training fee) will apply.
- → HKIB reserves the right to adjust training application, study guide and/or administration surcharge fees (if applicable), at any time.

7. Examination Application and Regulations

A. Examination Mode and Format

The examination mode and format for Core Level are as follows:

Module	1/2	3 / 4	
Examination Mode	Paper-based Examination		
Examination Duration	2 hours per Module	3 hours per Module	
Question Type	Multiple-choice Type Questions (MCQs)	Multiple-choice Type Questions (MCQs) & Essay Type Questions	
No. of Questions	60 MCQs per Module	50 MCQs & 2 out of 3 short questions per Module	
Pass Mark	60%		
	Grade	Mark Range	
	Pass with Distinction	>85%	
	Pass with Credit	75% - 85%	
Crading	Pass	60% - 74%	
Grading	Fail A	56% - 59%	
	Fail B	46% - 55%	
	Fail C	<46%	
	Absent	N/A	

B. Examination Timetable

For latest information about the examination application period and examination dates, please contact HKIB staff or refer to HKIB website at https://www.hkib.org/page/203.

C. Examination Application

- Candidates taking current training classes can choose to sit for the current examination or any subsequent ones. They can choose to sit for subsequent examinations but if the corresponding programme has been changed or updated, they may be required to re-take the training in order to be eligible for module examination.
- Applicants can submit the application via the electronic application form in HKIB webpage. Attention should be paid to the application deadline as a late entry fee may be charged.
- The information provided on the application form must be true and clear.
- Late examination enrolment will be accepted after the stipulated application deadline

- up to 14 days before examination date, to allow us to administer the application. A late entry fee of HKD 200 (in addition to the examination fee) will apply.
- Inaccurate or incomplete applications may not be accepted even if the applicant has paid the examination fee.
- Under no circumstances are changes to module entry allowed.
- ➡ HKIB reserves the right to reject late applications and/or any applications deemed inappropriate. Once HKIB has received the application form, NO alterations to the examinations and examination arrangements are allowed.
- **HKIB** reserves the right to change examination dates and application deadlines at any time.
- Applicants are advised to retain a copy of the completed application form for their own records.

D. Examination Fee and Payment

Per Module	1 - 4
First attempt	HKD 1,300
Re-attempt	HKD 1,300

- Applicants should pay the examination fee:
 - (a) By credit card. Please provide your credit card information on the application form.
 - (b) By FPS payment. Please provide your FPS payment receipt.
- Application forms without payment instruction will NOT be processed.
- ♣ All payments must be settled before the examination. NO fees are refunded or transferred under any circumstances.
- Applicants are advised to keep a record of their payments.
- HKIB reserves the right to adjust the examination, study guide and/or administration surcharge fees (if applicable), at any time.

Examination Application and Regulations

ECF-Fintech

E. Examination Attendance Notice

♣ Examination Attendance Notices (Attendance Notices) are sent to candidates via email ONLY approximately two weeks before the examination. Candidates must inform the Institute if they have not received it one week before the examination.

Candidates are required to print a copy of the Attendance Notice on a sheet of plain A4 paper before attending each examination.

Candidates MUST present their Attendance Notice at the examination along with a valid identification document (e.g. an HK Identity Card or passport) bearing a current photograph. Photocopies are not accepted.

F. Alteration/Transfer of Application for an Examination

HKIB reserves the right to cancel, postpone and/or reschedule the examination.

If an examination is rescheduled, HKIB notifies candidates of the new date and time via email within 1 week of the original schedule. Under such circumstances, candidates are not required to re-register for the examination.

■ Under no circumstances are any changes to or transfers of examination application allowed.

G. Examination Arrangements for Candidates with Special Needs

Candidates with special needs may request special examination arrangements. Under these circumstances they are required to submit documentary evidence, such as medical proof issued by a registered medical practitioner, together with a written request, when applying for the examination. Approval of the request is subject to final HKIB decision.

Request for such arrangements may result in an additional charge.

H. Examination Preparation

Candidates enrolled in the examination are required to study all the essential, recommended and further reading material, if applicable, as part of their examination preparation.

Examination Application and Regulations

ECF-Fintech

I. Examination Results

For Core Level examination, candidates receive a result slip by post two to four weeks

from the examination date.

Results are not revealed by telephone, fax or email.

Candidates may check their examination results through HKIB's online platform. Can-

didates receive email notification once the examination results are available. The

online examination results are removed one month after they are released.

Results are withheld from candidates who have not paid in full any monies due or

payable to the Institute, including but not limited to examination application fees.

Candidates may request rechecking or remarking of their examination scripts within

one month of the issue of examination results by submitting a written request. An

administrative fee may apply. Please contact HKIB staff for details.

J. General Examination Regulations

An examination is governed by the regulations in force at the time of the examination and

notat the time of application, in case there are discrepancies between the two sets of regula-

tions.

On all matters concerning interpretation of the regulations, the Professional Standard

and Examination Board of the Institute has the final decision.

Candidates must complete the training class before taking the examination.

The examination is conducted in English.

Candidates must use an HB/2B pencil to answer the multiple-choice questions on the

Answer Sheets.

Examinations are conducted and invigilated by responsible persons appointed by

HKIB.

Examination Attendance Notices are sent to candidates via email **ONLY**. Candidates

are required to print a copy on a plain sheet of A4 paper and MUST take their Attend-

ance Notice to each examination, along with a valid identification document (e.g. HK

Identity Card or passport). Attendance Notices are collected by the invigilators before

the end of the examination, if necessary.

Examination Application and Regulations

ECF-Fintech

♣ Candidates should arrive at the examination venue at least 15 minutes before the start. Candidates must not enter the examination room until instructed to do so.

Candidates are not allowed to sit for the examination if they are unable to present Attendance Notice/valid identification document, or if the identification document does not contain a clear and current photograph of the candidate.

All examinations begin at the time stated on the Attendance Notice. Latecomers may be admitted during the first 30 minutes of the examination, but extra time will not be given to compensate for any time lost.

Smoking, eating and drinking are not allowed in the examination room. All mobile phones and other electronic devices must be switched off and placed in a location advised by the invigilator, before the examination begins.

All bags, books and other personal belongings must be placed in a location advised by the invigilator, before the examination begins.

If you need to go to the toilet during the examination, you should seek permission from an invigilator. An invigilator will accompany you and you must NOT carry any mobile phones, other electronic devices, question books, answer sheets or other papers to the toilet.

No other aids, such as books, dictionaries, computers (e.g. notebooks, PC tablets) or papers are permitted in the examination. No draft paper is provided during the examination. Rough workings or notes should be made on the question book and will not be marked.

The packets of question papers are opened in the presence of the candidates before the start of the examination. Candidates should remain silent and are not allowed to communicate with other candidates during the examination. Candidates interfering with the proper conduct of the examinations could receive warning from the invigilator, and in serious cases, expelled from the examination room. Under such circumstances, a report is submitted to HKIB to consider whether further disciplinary action should be taken. Disciplinary action includes, but is not limited to, candidate disqualification.

Candidates cannot leave the examination room during the first 45 minutes and the last 15 minutes of an examination. Candidates who decide to leave early must notify the invigilator as quietly as possible and are not allowed to re-enter the examination room.

- ♣ Candidates must stop writing when instructed to do so by the invigilator.
- Candidates must not detach any part of their answer sheet, or remove their answer sheet, wholly or partly, from the examination room.
- Candidates are not allowed to communicate with other candidates during an examination. They are also prohibited from communicating with third parties outside the examination room by using any electronic device. The invigilator has the right to expel candidates from the examination room if their behaviour interferes with the proper conduct of the examination. Any candidate attempting to copy from another candidate's script or any other source is disqualified.
- ♣ Pocket calculators: Financial calculators may be used and listed below:

Calculator Model

- Texas Instruments: BA II Plus (both versions), including the BA II
- PlusProfessional
- Hewlett Packard: HP 10B, HP 10bII, HP 10bII+, HP12C (including the HP 12C
 Platinum and the Anniversary Edition), HP 12C Prestige, HP 17bII+, HP20B
- Sharp: Sharp Business/Financial Calculator EL-733, EL-733a
- Casio: FC 100/FC 100V/FC 200/FC 200V

Newer and older versions of these calculators will be allowed into the examination room

HKIB strictly enforces all policies with regard to calculator usage during examinations and candidates are required to abide by the policies of HKIB. Calculators are inspected prior to the start of the exam. They must remain on your desk in full view and invigilators continue to inspect calculators throughout the administration of the examination. Possession or use of an unauthorised calculator at the test centre results in the voiding of your examination results and may lead to the suspension or termination of your candidacy in HKIB Programme. Failure by the invigilators to detect an unauthorised calculator prior to the start of the examination, or your use of an unauthorised calculator at any time during the examination, does not imply that the calculator is an approved model or that your scores will ultimately be reported. Calculator covers, keystroke cards, and loose batteries are permitted in the examination room; instruction manuals are not allowed.

Examination Application and Regulations

ECF-Fintech

- Candidates are required to clear the financial calculator memory prior to each session of the examination. (Please do not ask invigilators to clear it.) It is the candidates' responsibility to revert their own calculator to desired setting(s) once the calculator's memory has been cleared. If a candidate's calculator has notes/formulas printed on the back of the calculator, includes pull-out cards or contains other supplemental material, this information must be removed or masked by solid colour tape before entering the examination room.
- If any candidate infringes any of the above regulations, he/she is liable to disciplinary actions, including disqualification.

8. Certification Application and Renewal Process

A. Certification Application

Relevant Practitioners who have completed Modules 1 to 4 of the "ECF-Fintech (Core Level)" programme, obtained a pass in the relevant examinations, plus at least 1 year of relevant working experience in Fintech projects and / or any of the Core Level functions such as Fintech Solution Development, Fintech Product Design, Fintech Strategy and Management or Regtech as specified in "Annex 1 of the HKMA's Guide to Enhanced Competency Framework on Fintech", may apply for Certification as "Associate Fintech Professional (CPFinT(A))" with HKIB professional membership.

Applicants are required to submit a completed Certification Application Form to HKIB together with the relevant supporting documents and payment of the required Certification Fee. The Certification Application form can be obtained from HKIB website.

Certification holders are registered as Certified Individuals and included in the public register on HKIB website. Upon successful application for the above Certification(s), professional membership will be granted by HKIB.

B. Certification Renewal

Certification of Associate Fintech Professional (CPFinT(A)) is subject to annual renewal by HKIB.

Certification holders are required to comply with the annual Continuing Professional Development (CPD) Scheme in order to renew their Certification. The requirement is a minimum of 12 verifiable CPD hours, at least 4 of which must be earned from activities related to topics of innovative technology (e.g. artificial intelligence, big data, cloud computing, cybersecurity, distributed ledger technology, and/or open banking and API), product development, business strategy and marketing, finance and investment, and/or risk and compliance. The remaining hours should be on training topics related to banking and finance, Fintech, or the job function. Examples of appropriate training topics include:

- a) Compliance, code of conduct, professional ethics or risk management;
- b) Banking and financial knowledge;

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- c) Emerging technologies in financial services (e.g. machine learning algorithms, deep learning, network analytics, visualisation, voice recognition, natural language processing and generation);
- d) Economics;
- e) Accounting;
- f) Legal principles;
- g) Business and people management;
- h) Language; and
- i) Information technology.

Certification holders are to renew their certification registration annually in January. Renewal email will be sent to members before renewal deadline. Certification holders who do not pay the continuing membership subscription on or before 31 January of each calendar year are treated as Default Members.

C. Certification Fee and Payment

♣ The application fee for Certification in various categories are as follows: (Valid until 31 December 2023)

Certification	First year certification - Non-HKIB member: HKD1,650 - HKIB ordinary member: HKD570 - HKIB professional member: Waived - HKIB senior member: HKD1,450
Certification Renewal	Annual Renewal - Certification: HKD1,650 - Re-registration fee of default member: HKD2,000

- ♣ Applicants should pay the Certification Fee and Certification Renewal Fee as follows:
 - (a) Paid by Employer.
 - (b) By credit card. Please provide your credit card information on the application form.
 - (c) By FPS payment. Please provide your FPS payment receipt.
- Application forms without payment instruction are NOT processed.
- **NO** fees are refunded or transferred under any circumstances.

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Applicants are advised to keep a record of their payment.

HKIB reserves the right to adjust the certification, re-certification and/or administration

surcharge fees (if applicable), at any time.

D. Certification and HKIB Membership Regulations

It is mandatory for all individuals to maintain a valid professional membership with HKIB if

the applicants want to apply for and maintain certification and be subject to HKIB member-

ship governance.

Once an application is processed, the membership subscription and registration fees are

non-refundable and non-transferable.

The name of the member to be entered on HKIB's records is that on the certification appli-

cation form. This name, and the order and spelling in which it is presented are used sub-

sequently on all transcripts, pass lists, diplomas, and certificates except where a member

has notified HKIB of any change. Such notification must be accompanied by a certified true

copy¹ of documentary confirmation, e.g. Hong Kong Identity Card, birth certificate, statu-

tory declaration, etc.

Certification holders are bound by the prevailing rules and regulations of HKIB. They are

abide by HKIB's rules and regulations in HKIB Members' Handbook. Certification holders

are required to notify HKIB of any material changes to any information provided and re-

sponses made in certification application, including their contact details. HKIB may inves-

tigate the statements certification holders made with respect to applications, and applicants

may be subject to disciplinary actions for any misrepresentation (whether fraudulent and

otherwise) in their applications.

1 Submitted copies of documents to HKIB must be certified as true copies of the originals by:

- HKIB designated staff; or

- HR/authorized staff of current employer (Authorized Institution); or

- A recognized certified public accountant / lawyer / banker / notary public; or

- Hong Kong Institute of Chartered Secretaries (HKICS) member.

The certifier must **sign** and **date** the copy document (printing his/her **name** clearly in capital letters underneath) and clearly indicate his/her **position** on it. The certifier must state that it is a true copy of the original content of the copy of the original content of the copy of the original content of the certifier must state that it is a true copy of the original content of the copy of the original content of the certifier must state that it is a true copy of the original content of the certifier must state that it is a true copy of the original content of the certifier must state that it is a true copy of the original content of the certifier must state that it is a true copy of the original content of the certifier must state that it is a true copy of the original content of the certifier must state that it is a true copy of the original content of the certifier must state that it is a true copy of the original content of the certifier must state that it is a true copy of the original content of the certifier must state that it is a true copy of the original content of the certifier must state that it is a true copy of the original content of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the certifier must state that it is a true copy of the c

nal (or words to similar effect).

Certification Application and Renewal Process

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E. Membership Reinstatement

Members who have not paid the annual certification fees when due shall be considered as default members and are not entitled to use HKIB Professional Qualification, and may not call themselves members of the Institute.

Default members who reinstate their membership with HKIB are required to pay the current year's subscription plus a re-registration fee. Once the membership is reinstated, the member's examination record, if any, will be reactivated.

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9. Exemption Application and Regulations

9.1 Module Exemption Requirements

Exemption for modules of the "Associate Fintech Professional (CPFinT(A))" will be granted for practitioners who have passed any of the following training / professional programme(s):

Module	Training Programme (University Degree)	Programme Provider
Module 1	BEng Fintech	Chinese University of Hong Kong
	MSc Fintech	Chinese University of Hong Kong
	BSc Computational Finance and Financial Technology	City University of Hong Kong
	Associate of Science (Financial Technology)	College of International Education, Hong Kong Baptist University
	MSc Finance (Fintech and Financial Analytics)	Hong Kong Baptist University
	BBA (Hon) Financial Technology and Innovation	Hong Kong Metropolitan University
	BSc (Hon) Financial Technology and Artificial Intelligence	Hong Kong Polytechnic University
	Doctor Financial Technology	Hong Kong Polytechnic University
	BCom (Hon) in Financial Technology	Hong Kong Shue Yan University
	MSc Fintech	Hong Kong University of Science and Technology
	Advanced Diploma in FinTech	HKU SPACE
	Executive Certificate in FinTech	HKU SPACE
	Executive Certificate in Banking and Financial Technology	HKU SPACE
	BASc Financial Technology	University of Hong Kong
	MSc Fintech	University of Hong Kong
	MSc Financial Technology and Data Analytics	University of Hong Kong

	Training Programme (Online Courses)	Programme Provider
	Harvard Fintech Online Short Course with Harvard VPAL Premier Certificate	Harvard University
	FinTech: Finance Industry Transformation and Regulation Specialization of Coursera	Hong Kong University of Science and Technology
	Fintech: Innovation and Transformation in Financial Services	National University of Singapore
	The Future of Finance Professional Certificate of edX	University of Texas
	Professional Programme	Programme Provider
	Shenzhen-Hong Kong-Macau Fintech Professional Programme Level 1	Shenzhen Fintech Association, Chinese Financial Association of Hong Kong, and Macau Institute of Financial Services
	Certificate in Finance and Technology Level 1	Institute of Financial Technologists of Asia
Module 2	Training Programme (University Degree)	Programme Provider
	BCom (Hon) in Financial Technology	Hong Kong Shue Yan University
	BBA (Hon) Financial Technology and Innovation	Hong Kong Metropolitan University
	Training Programme (Advanced Diploma)	Programme Provider
	Advanced Diploma for Certified Banker – "Fundamental of Bank- ing", "Professional Ethics and Compliance", and "Risk Manage- ment"	The Hong Kong Institute of Bankers

	Advanced Diploma for Certified Banker – "Fundamental of Bank- ing", and ECF- Operational Risk Management / ECF- Compliance – "Module 2: Regulatory Framework and Compliance in the Banking In- dustry"	The Hong Kong Institute of Bankers	
Module 4	Training Programme (University Degree)	Programme Provider	
	BEng Fintech	Chinese University of Hong Kong	
	MSc Fintech	Chinese University of Hong Kong	
	BSc Computational Finance and Financial Technology	City University of Hong Kong	
	Associate of Science (Financial Technology)	College of International Education, Hong Kong Baptist University	
	MSc Finance (Fintech and Financial Analytics)	Hong Kong Baptist University	
	BSc (Hon) Financial Technology and Artificial Intelligence	Hong Kong Polytechnic University	
	Doctor Financial Technology	Hong Kong Polytechnic University	
	BCom (Hon) in Financial Technology	Hong Kong Shue Yan University	
	MSc Fintech	Hong Kong University of Science and Technology	
	Advanced Diploma in FinTech	HKU SPACE	
	BASc Financial Technology	University of Hong Kong	
	MSc Fintech	University of Hong Kong	
	MSc Financial Technology and Data Analytics	University of Hong Kong	
	OR		
	A candidate who has completed at least one of the certifications in any one of the following specialist areas from key market players or service/platform providers is eligible to apply for exemption on Module 4 of the ECF- Fintech Core Level training programme:		
	 Artificial Intelligence and Big Data Analytics: e.g. AWS Machine Learning - Specialty, Microsoft Al Engineer, AWS Data Analytics - Specialty, Microsoft Data Engineer, Microsoft Data scientist, Google Data Analytics, etc. 		

- Cloud Computing for Business Applications: e.g. AWS Certified Cloud Practitioner, GCP Associate Cloud Engineer, Alibaba Cloud Certified Associate-Cloud Computing, Microsoft Certified: Azure Fundamentals, etc.
- Blockchain and Distributed Ledger Technology: e.g. Blockchain Certification Course (from EC Council), P. G. Diploma in Blockchain Technology (from UpGrad), Certified Enterprise Blockchain Architect (CEBA), Blockchain Technology EdX, Blockchain Fundamentals Certificate (from ISACA), etc.

9.2 Modular Exemption Application

- Candidate with relevant qualifications may apply for module exemption from "Professional Certificate for ECF on Fintech".
- Exemption application should be made on an exemption form together with the following documents/items; failing to do so delays assessment:
 - i. Appropriate fees (application fee and exemption fees)
 - ii. Copies of transcript and certificate, if applicable
- Documents submitted will not be returned regardless of the application result.
- Unless otherwise specified, exemption application based on partially attained qualification is not accepted.
- Exemption claims granted to student members are only registered in HKIB's record upon the student members' graduation.
- Exemption results are normally given in writing within 60 days after receipt of application and supporting documents. If further assessment is needed due to unexpected circumstances, separate notifications are given. The decision of the Institute is final and cannot be appealed.
- Candidate attempting but failing in a module may subsequently claim exemption from that module if they obtain a new/further qualification recognised for exemption purposes.
- An exemption confirmation letter is issued to candidate whose exemption application is granted.
- Candidate exempted from a module subsequently attempting that module by examination, have their exemption status overridden.

10. General Information

10.1 Bad Weather Arrangements

In the event of bad weather on the training class/examination day, candidates should visit HKIB website at www.hkib.org for announcements about the latest arrangements and should pay attention to radio/television broadcasts about weather conditions.

If the typhoon signal No. 8 or above, black rainstorm signal, or "extreme conditions" is hoisted or still in force on the day of a training class, the arrangements below apply:

Signal in force	Training Class(es) cancelled
At 6:30am	Morning Session (8:30am – 2:00pm) is cancelled.
At 12:00noon	Afternoon Session (2:00pm – 6:00pm) is cancelled.
At 3:00pm	Evening Session (6:00pm – 10:00 pm) is cancelled.

If the typhoon signal No. 8 or above, black rainstorm signal, or "extreme conditions" is hoisted or still in force on the day of an examination at the following times, the arrangements below will apply:

Signal in force	Examination cancelled
At 6:00am	Examination(s) (8:00am – 1:00pm) are cancelled.
At 10:00am	Examination(s) (1:00pm – 5:00pm) are cancelled.
At 2:00pm	Examination(s) (at 5:00pm or after) are cancelled.

- If typhoon signal No. 8 or above, black rainstorm signal, or "extreme conditions" is hoisted or still in force while the training class/examination is in progress, the training class/examination continues as scheduled.
- If a training class/examination is rescheduled, HKIB notifies candidates of the new training class/examination date and time by email within one week of the originally

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scheduled date. Under such circumstances, candidates are not required to re-register

for the training class/examination. Applications for a refund and/or transfer are NOT

allowed.

HKIB reserves the right to postpone, cancel and/or reschedule any training class/ ex-

amination.

10.2 Personal Data Protection

Personal data provided by the candidate are used for administrative and communicative

purposes relating to training and examination. Failure to provide complete and accurate

information may affect the provision of administrative services to the candidate. The Insti-

tute keeps the personal data provided confidential, but may need to disclose it to appropri-

ate personnel in the Institute and other relevant parties engaging in the provision of exam-

ination services to the Institute. Candidates have the right to request access to and correc-

tion of their personal data. For details, candidates can contact the Institute.

Candidates are advised to read the Privacy Policy Statement to understand their rights and

obligations in respect of the supply of personal data to HKIB and the ways in which HKIB

may handle such data.

10.3 Addendums and Changes

HKIB reserves the right to make changes and additions to membership, training and ex-

amination regulations, enrolment/application procedures, information in this handbook and

any related policies without prior notice. HKIB shall bear no responsibility for any loss to

candidates caused by any change or addition made to the aforementioned items.

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Last updated: 23 May 2022

11. Contact information

HKIB Head Office Address

3/F Guangdong Investment Tower, 148 Connaught Road Central, Hong Kong



General Enquiries

Tel.: (852) 2153 7800 Email: cs@hkib.org

Training and Programme Enquiries

Tel.: (852) 2153 7800 Email: ecf@hkib.org

Membership Enquiries

Tel.: (852) 2153 7879 Email: membership@hkib.org

Examination Enquiries

Tel.: (852) 2153 7821 Email: exam@hkib.org

Certification Enquiries

Tel.: (852) 2153 7865 Email: cert.gf@hkib.org

Office Service Hours

Monday - Friday: 09:00 - 18:00