City University of Hong Kong
Course Syllabus

offered by the Department of Information Systems
with effect from Semester A 2024 / 2025

Part I Course Overview

Course Title:	Introduction to Financial Technologies
Course Code:	IS5010
Course Duration:	One Semester
Credit Units:	3
Level:	P5
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: *(Course Code and Title)*	Nil
Precursors: *(Course Code and Title)*	Nil
Equivalent Courses: *(Course Code and Title)*	Nil
Exclusive Courses: *(Course Code and Title)*	Nil

Part II Course Details

1. Abstract

This course provides an overview of financial technologies (FinTech) in banking, financial markets, insurance, and regulations. Key topics include virtual and mobile banking, crowdfunding, payment platforms, open banking, Robo-advisory, high-frequency trading, RegTech, InsurTech, and blockchains. Students will examine the use of these technologies in facilitating core functions of financial services and assess the risks involved. In discussing various technologies, the course will cover related regulatory issues. Students will acquire skills to think critically about the economic and managerial implications in implementing financial technologies through real-world case studies. In examining disruptive financial technologies and understanding the challenges and opportunities for traditional financial services, this introductory course will pave way for students aiming for an IT-related career in the financial sector.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Describe and gain insight into FinTech compliance and regulations for different financial services in banks and other financial institutions.	40%	✓	✓	
2.	Reflect value of financial information systems and regulatory compliance to the effectiveness of management and the efficiency of transaction processing in financial services.	30%	✓	✓	
3.	Apply analytical skills to investigate and critically evaluate financial services innovations as a result of key enabling technologies from the perspectives of value proposition, alternative technologies, competition, risks and risk management, etc.	30%	✓	✓	✓
		100%			

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions, or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines, or applying academic knowledge to real-life problems.

A3: Accomplishments
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artifacts, effective solutions to real-life problems, or new processes.

3. Learning and Teaching Activities (LTAs)

(LTAs designed to facilitate students' achievement of the CILOs.)

LTA	Brief Description	CILO No.			Hours/week (if applicable)
		1	2	3	
LTA1: Lecture	Students will learn various financial technologies and compliance for financial services in banks and other financial institutions by using real-life examples, accompanied by in-class discussions and activities led by the lecturer.	✓	✓	✓	Seminar: 3 Hours/Week (Lecture + Case Discussion)
LTA2: Case Discussion	Students are required to discuss and analyze how information technologies could be applied and contributed to the efficiency of financial services industries through case analyses.	✓	✓	✓	
LTA3: Peer Discussion	Students investigate an IT-enabled financial services innovation in groups applying analytical skills learned during the course.	✓	✓	✓	

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.			Weighting	Remarks[#]
	1	2	3		
Continuous Assessment: 60%					
AT1: In-Class Discussion Students are encouraged to discuss and reflect on the materials covered in lectures. Students are required to study read the assigned cases before class.	✓	✓	✓	20%	
AT2: Individual Assignments Assignments will be given to assess students' understanding of the contents covered in the lectures.	✓	✓	✓	10%	
AT3: Group Project A group project, which includes a written report and an oral presentation, will be assigned to students to explore, investigate and critically evaluate a financial services innovation using the knowledge and analytical skills learned.	✓	✓	✓	30%	
Examination: 40% (duration: one 2-hour exam)					
AT4: Final Examination Students will be assessed via the examination on their understanding of concepts learned in class, textbooks, reading materials, and their ability to apply subject-related knowledge.	✓	✓	✓	40%	
				100%	

[#] Remark: Students must pass BOTH coursework and examination in order to obtain an overall pass in this course.

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Applicable to students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter

Assessment Task (AT)	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
AT1: In-Class Discussion	CILO1 - 3 Demonstrate evidence of active learning through participating in the class discussion, asking critical questions, and completing extra-credit activities.	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT2: Individual Assignments	CILO1 - 3 Demonstrate a good understanding of content (technology, system, and business concepts) and analytical skills taught in the class through accomplishing individual assignments.	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT3: Group Project	CILO1 - 3 • Demonstrate a good understanding of basic system concepts and the capability to synthesis the value of financial information systems and regulatory systems in enabling innovative financial services and create value interactions. • Demonstrate capability to apply analytical skills to investigate and critically evaluate financial services innovations as a result of key enabling technologies from the perspectives of value proposition, alternative technologies, competition, risks and risk management, etc. • Demonstrate great team working spirit and collaboration skills (peer evaluation and presentation).	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT4: Final Examination	CILO1 - 3 • Demonstrate a good understanding of content (technology, system, and business concepts) and analytical skills taught in the class through accomplishing individual assignments. • Demonstrate good analytical skills in applying business analysis frameworks in answering questions.	High	Significant	Moderate	Basic	Not even reaching marginal levels

Applicable to students admitted from Semester A 2022/23 to Summer Term 2024

Assessment Task (AT)	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
AT1: In-Class Discussion	CILO1 - 3 Demonstrate evidence of active learning through participating in the class discussion, asking critical questions, and completing extra-credit activities.	High	Significant	Basic	Not even reaching marginal levels
AT2: Individual Assignments	CILO1 - 3 Demonstrate a good understanding of content (technology, system, and business concepts) and analytical skills taught in the class through accomplishing individual assignments.	High	Significant	Basic	Not even reaching marginal levels
AT3: Group Project	CILO1 - 3 • Demonstrate a good understanding of basic system concepts and the capability to synthesis the value of financial information systems and regulatory systems in enabling innovative financial services and create value interactions. • Demonstrate capability to apply analytical skills to investigate and critically evaluate financial services innovations as a result of key enabling technologies from the perspectives of value proposition, alternative technologies, competition, risks and risk management, etc. • Demonstrate great team working spirit and collaboration skills (peer evaluation and presentation).	High	Significant	Basic	Not even reaching marginal levels
AT4: Final Examination	CILO1 - 3 • Demonstrate a good understanding of content (technology, system, and business concepts) and analytical skills taught in the class through accomplishing individual assignments. • Demonstrate good analytical skills in applying business analysis frameworks in answering questions.	High	Significant	Basic	Not even reaching marginal levels

Part III Other Information

1. Keyword Syllabus

(An indication of the key topics of the course.)

- Introduction
  - Banking and investments
  - Machine-Platform-Crowd
  - Financial technologies
- FinTech in Banking
  - Virtual bank, mobile banking
  - Crowdfunding
  - Payment platform
  - Open banking, Investment banking
- FinTech in Trading
  - Basic trading concepts
  - Retail investor, robo-advisory, wealth management
  - Institutional trading, high-frequency trading
- Others
  - RegTech
  - InsurTech
  - Blockchain, Cryptocurrency, Cybersecurity

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Cases specified in class

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

1.	Duran, R. E., Financial Service Technology: Processes, Architecture, and Solutions, 2nd Edition, Cengage Asia, 2017.
2.	Arslanian, Henri, Fabrice Fischer. The Future of Finance: The Impact of FinTech, AI, and Crypto on Financial Services. Springer, 2019.
3.	Barberis, J., Douglas, W. A., Buckley, R., The REGTECH Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries in Regulation, John Weily & Sons, 2019.
4.	Madir, J., FinTech: Law and Regulation (Elgar Financial Law and Practice), Edward Elgar Pub., 2019.
6.	Kim, K., Electronic and Algorithmic Trading Technology: The Complete Guide, Academic Press, 2007.
7.	King, B., Bank 4.0: Banking Everywhere, Never at a Bank, John Weily & Sons, 2019.
8.	Philippon, T., The FinTech opportunity. National Bureau of Economic Research, 2016.
9.	McAfee, A., Brynjolfsson, E., Machine, platform, crowd: Harnessing our digital future. WW Norton & Company, 2017.