



ISOM4840 Financial Service Operations Management Fall 2026

Department of Information Systems, Business Statistics &
Operations Management

Course Description

Financial activities are the most important and fundamental economic activity in any modern economy. We focus on the structuring of key financial service processes in different sectors and adopt a systems perspective. We consider a wide range of service and product fulfillment processes from different sectors including commercial banking, insurance, and other investment banking. Starting from key productivity and performance measurements, we will examine issues of quality control and operational risk in these various sectors. The course concludes with intersection of automation and customization of financial services and operations, and the resulting new development and trends in the industry. Examples include AI, blockchain, fintech, mobile payments, wealth management, and their fundamental value propositions.

Fall 2026

Time/Venue: Monday and Wednesday, 10:30-11:50am, LSK1011

Instructor

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Textbook

No required textbook; learning materials will be posted on Canvas.

Grading Policy

Final course grade will be determined by the following criteria and point distribution.

Attendance and participation	10
Case analysis*	15
Project presentation*	15
Final exam	60
Total	100

For attendance and participation, you will receive 5 (out of 10) points in the beginning for full attendance of class from sessions week 3 onward. If you are late to class (more than 15 minutes), 0.5 point will be deducted. If you are absent from class without a valid reason, 1 point will be deducted. On the other hand, you will earn a maximum of 1 point per week, from week 3 onward for active participation in class.

*Work should be done in groups of no more than three. For assessment rubrics and details, please refer to Appendix 1-3. If needed, the scores for all group work will be further adjusted by peer evaluation at the end.

Learning Objectives

By the end of the course, students should be able to:

1. Identify and describe the diverse range of financial services and technological advancements shaping the modern financial landscape
2. Compare and evaluate the performances of the business processes for continuous improvement of the financial institutions.
3. Design and critique different financial innovations for improving the productivity and service quality in financial supply chain management.
4. Evaluate broader themes in operational risk management strategies.
5. Discuss relevant innovation and compliance issues in financial services.
6. Assess the impact of AI and blockchain/digital ledgers on financial operations.
7. Explore quantum computing potential in further optimizing financial operations and discuss relevant innovation and compliance issues in financial services.

Use of GenAI

You are encouraged to using generative AI (such as ChatGPT) to research relevant materials but are prohibited to using AI for producing any content related to all Assessment tasks such as case analysis, group project, and exam.

Academic Integrity

Students at HKUST are expected to observe the Academic Honor Code at all times (see <http://www.ust.hk/vpaa/integrity/> for more information). Zero tolerance is shown to those who are caught cheating on any form of assessment and a zero mark will be given. In particular, any act of cheating on exam will automatically result in an F grade for this course.

Course Outline

Week 1 September 2	Overview of financial services ■ Range of financial services and their core functions ■ Retail and investment banks, asset management, insurance, etc. ■ Best practices and technology in financial service operations ■ Reading: Financial services industry in Hong Kong
Week 2 September 7, 9	Strategic issues and driving forces of change ■ Forces of changes and emerging technology innovation in the financial services industry ■ Strategic implications of increasing M&A activities in the financial industry ■ Example: Role of financial services in digital trade Product and process design in financial services industry ■ Operational synergy and financial supply chains ■ Impacts of emerging payment medium (e.g., stablecoins) on the traditional banking industry and payment methods ■ Regulatory requirements and operational due diligence ■ Reading: The future of financial services
Week 3 September 14, 16	Business models for value creation and profit ■ How financial institutions make profit and impacts on customers and service experience etc. ■ How AI is transforming financial services ■ Reading: 6 key trends shaping the future of financial services Digital banking services ■ Case discussion: EnableTec
Week 4 September 21, 23	Retail bank operations and distribution channels ■ Characteristics of retail bank operations and distribution channels ■ Omnichannel operations to balance physical branches with digital channels ■ Deploying AI in financial services ■ Reading: Banking II Supply chain finance ■ Supplier-based vs. Buyer-based financing ■ Reading: Supply chain finance as the “new normal” ■ Case discussion: Haier

Week 5 September 28, 30	Developing new financial services ■ E-wallets: High-volume micro-payments (e.g., PayMe or AlipayHK) ■ Reverse mortgage for an aging population ■ Reading: How instant payments expose banks to new risks Financial innovations in the value chain ■ Case discussion: Hongxuan Agriculture
Week 6 October 5, 7	Operational risk management in financial services ■ Operational risks (internal fraud and system failures, etc.) ■ Innovative ways of managing operational risk management with technologies (e.g., AI) ■ Review of risk management practices with new regulatory requirements and compliance considerations, as innovation and emerging technology becomes the “new normal” ■ Future technology for predictive risk insights
Week 7 October 12, 14	AI in financial operations ■ AI applications in fraud detection, loan approvals, and investments, etc. ■ Personalization and efficiency through AI ■ Ethical challenges and biases in AI ■ AI chatbots and fraud prevention ■ For discussion: AI chatbots and personalization: Customer service efficiency ■ For discussion: Using AI to manage fraud risks?
Week 8 October 21	Customer service innovations in back-office operations ■ Evolution of technology in customer service ■ Role of AI in call centers and back-office automation ■ Balancing automation with human interaction ■ For discussion: How can AI virtual assistants enhance customer service operations? ■ For discussion: What are the possible uses of voice analytics to improve call center performance and customer satisfaction?
Week 9 October 26, 28	Impacts of blockchain and digital ledgers on financial operations and products ■ Basics and use cases of blockchain ■ Regulatory and integration challenges ■ Applications of smart contracts in supply chain transactions and insurance claim processing ■ For discussion: What are the impacts of blockchain on reducing transaction times and costs? ■ For discussion: How DLT technologies help facilitate secure cross-border payments?
Week 10 November 2, 4	Quantum computing in financial services ■ Introduction to quantum computing applications ■ Current experiments and future potential applications ■ Challenges in adoption and expertise needs ■ Applications of portfolio optimization and security enhancements ■ For discussion: What can we learn from financial institution experiments to optimize trading strategies using quantum algorithms?? ■ For discussion: How can financial institutions make potential improvements in risk modeling using quantum risk assessment?

Week 11 November 9, 11	Innovation and compliance Issues ■ Balancing innovation with regulatory compliance ■ Impact of fintech on traditional banking ■ Future trends and real-time compliance ■ For discussion: For discussion: How have Fintechs managed to balance regulatory adherence with innovation and processing? ■ For discussion: How do fintech startups manage compliance while innovating financial data solutions?
Week 12 November 16, 18	Group project presentation
Week 13 November 23, 25	Group project presentation Course review

For arrangement of class under weather warning signals, please refer to the University's official policy at <https://registry.hkust.edu.hk/resource-library/bad-weather-arrangement-case-typhoon-or-rainstorm-class>. If needed, announcement will be made in Canvas to hold the class in Zoom.

CASE ANALYSIS

General information:

While there is no page limit for the case analysis, it should be about two pages long, single spaced between lines but double spaced between paragraphs. *Please note that all written assignments will be checked by Turnitin for plagiarism. Penalty will be imposed for any submission with a high similarity score.* To avoid receiving a high similarity score, please do not copy and paste the case assignment questions or extensive use of exact wordings in the case.

For facilitating your case analysis, a list of suggested questions are given (below) but you don't need to follow them exactly. You can organize your answer any way you think best. Make sure your analysis is concise (use of bullet points for the answers is allowed) and avoids repeating information that already given in the case. A submission link is provided in Canvas for you to upload the analysis. Late assignment will not be accepted.

Case 1. EnableTec: Exploring the World of Digital Banking

Due before class

- (a) In the event that EnableTec were to switch to digital banking, which elements of the business operations should be done through digital banks?
- (b) Which bank or banks were the most suitable for the company?
- (c) Were there other items, or blind spots, that Mandy and her team should consider that had yet to be identified?

Case 2. Haier: Putting Supply Chain Finance to Work

Due before class

- (a) What was the financial impact of Haier's payment term extension on Haier itself? Quantify the working capital captured from suppliers and distinguish between the effects of deliberate term extension versus business growth, and explain why Haier's DPO increased only modestly while its absolute working capital capture grew disproportionately?
- (b) What did HIGA gain from participating in Haier's SCF program? Quantify the working capital relief and explain the paradox of surging operating cash flow alongside declining net profit.
- (c) Is Haier's SCF program genuinely beneficial for all participants? Who gains, who loses, and what are the long-term trade-offs for a supplier like HIGA in terms of dependency, data transparency, and bargaining power?

Case 3. Hongxuan Agriculture: Innovations in the Value Chain

Due before class

- (a) What innovations has Hongxuan achieved? How the company created new value in an era of consumption upgrades?
- (b) What challenges could affect the future development of Hongxuan? What solutions can you suggest?
- (c) If you were a banker or an insurance company representative, would you be willing to provide financing or egg value insurance for Hongxuan? Why or why not?

APPENDIX 1

ASSESSMENT RUBRICS FOR CASE ANALYSIS

Evaluation criteria (20 points each for each criterion for a total of 100 points)

Scoring rubrics	Well exceed expectation (19-20)	Exceed expectation (17-18)	Meet expectation (12-16)	Below expectation (0-11)	Score
Identification of the main issues and/or problems	Identify and understand completely all the main issues and problems	Identify and understand most of the main issues and problems	Identify and understand some of the main issues and problems	Identify and understand only few of the main issues and problems	
Quality of questions and research	Ask extremely clear, concise, and relevant questions and perform extensive research on the main issues	Ask very clear, concise, and relevant questions and perform good research on the main issues	Ask clear, concise, and relevant questions and perform just adequate research on the main issues	Fail to ask clear, concise, relevant questions and perform inadequate research on the main issues	
Analysis of the issues	Insightful and thorough analysis of all the issues	Thorough analysis of most of the issues	Superficial analysis of some of the issues	Incomplete analysis of the issues	
Comments on effective solutions or business practices	Well identified, reasoned and appropriate comments or proposal on solutions to all issues	Appropriate, well thought-out comments on solutions or proposal for solutions to most issues	Superficial and/or inappropriate solutions to some of the issues	Little or no action suggested, and/or inappropriate solutions to the issues	
Use of language	Free of any grammatical or spelling error; good choice of words	A few grammatical or spelling errors; should have better choice of words	Some grammatical or spelling errors	Lots of grammatical or spelling errors	
Total: Use the following ranges to reflect the overall performance. 96-100 (exceptional report writing and extremely effective); 90-95 (very good report writing and very effective); 80-89 (good and effective); 70-79 (acceptable and somewhat effective); 69 or below (weak and not effective).					

APPENDIX 2

ASSESSMENT RUBRICS FOR PRESENTATION

Evaluation criteria (max 20 points each criterion for a total of 100 points)

Subject matter: Interesting, relevant topic; well researched materials; clear purpose with a thoughtful conclusion	
Contents: Main points are well organized/developed; informative and accurate content; have a clear focus; clear introduction and conclusions; insightful/practical implications	
Visual effects: Visual aids / slides are creative; clear and easy to read and understand; enhance the effectiveness of the presentation; free of obvious misspellings or typos	
Presentation skills: Professional; comfortable and confident; good verbal and non-verbal communication; flow and pace is consistently appropriate; good command of language; appropriate voice volume and tone	
Audience control: Maintain good eye contact; enthusiastic; use the unexpected to full advantage; hold the audience's attention throughout; finish within the allotted time	
Total: Use the following ranges to reflect the overall performance. 96-100 (exceptional presentation and extremely effective); 90-95 (very good presentation and very effective); 80-89 (good and effective); 70-79 (acceptable and somewhat effective); 69 or below (weak and not effective).	

Assessment rubric

	Exemplary	Above expectation	Meet expectation	Below expectation	Not acceptable
Points	19-20	17-18	15-16	13-14	0-12

Adjustment for individual student's presentation performance

Student	Performance / Comments

APPENDIX 3

PEER EVALUATION FOR GROUP WORK

Evaluated by: _____

Evaluation criteria (max 20 points each criterion for a total of 100 points)

Criteria	Significantly below expectation (0-13 points)	Below expectation (14-15 points)	Meet expectation (16-17 points)	Exceed expectation (18-19 points)	Significantly exceed expectation (20 points)
Participation	Miss several team meetings without prior notice; do not participate effectively in team discussion of project issues	Miss one meeting without prior notice; or missed several team meetings with prior notice; participated in team discussions when asked	Miss no more than one team meeting with prior notice and proactively contribute to the team dialogue in most meetings	Attend all team meetings and often is a significant contributor to the team discussions	... plus are proactive in helping the team solve problems outside of meetings / assigned tasks, e.g., lead informal meetings to resolve team issues
Reliability	Work is usually incomplete and/ or late	Deliver most assigned work products on time and address assigned scope adequately in most cases	Deliver all assigned work products on time and consistently address assigned scope fully and appropriately	Consistently complete assignments early and/or often address additional scope beyond assigned	... and, in so doing, add value beyond assignment
Initiative and Sense of Responsibility	Wait until due date to bring up issues with assignment; are often not prepared for meetings	Reach out to other team members at last minute so there is not enough time to fix before due date; sometimes are not prepared for meetings	Verify scope of assigned work; when having difficulty with assigned work, is proactive to reach out to other team members with sufficient time to receive help; usually are prepared	Sought feedback on progress periodically throughout assignment to ensure that he/she was on target and is always prepared	Consistently take initiative to resolve issues through consultation with others, keeping everyone in the loop
Work quality	Work frequently contains mistakes, or is poorly communicated or without supporting backup evidence	Assign work is largely error free, but not always well communicated or with weak supporting rationale and backup	Assigned work is largely error free, clearly communicated verbally and graphically with adequate supporting backup materials	Work consistently error-free, well communicated verbally and graphically, with strong backup materials	... plus evidence of significant ingenuity or creativity or insight for the benefit of the team
Overall contribution to project success	Have almost no contribution	Have little contribution	Have some contribution	Have more contribution	Have significant contribution

Please evaluate each team members including *yourself* according to the five criteria as shown above. Your evaluation on your own performance is for reference only. Please refer to the rubrics for description. While using the individual rubrics are optional, you must enter the **total score** in the space below using the following ranges to reflect the overall performance: 96-100 (exceptional team player or leader); 90-95 (very good team player); 80-89 (good team player); 70- 79 (acceptable team player); 69 or below (weak and not effective team player).

Name of Student	Participation	Reliability	Initiative	Work Quality	Contribution	Total Score