Annexe A: New/Revised Course Content in OBTL+ Format

Course Overview

The sections shown on this interface are based on the templates UG OBTL+ or PG OBTL+
If you are revising/duplicating an existing course and do not see the pre-filled contents you expect in the subsequent sections e.g. Course Aims, Intended Learning Outcomes etc. please refer to Data Transformation Status for more information.

Expected Implementation in Academic Year	AY2023-2024
Semester/Trimester/Others (specify approx. Start/End date)	Semester 1
Course Author * Faculty proposing/revising the course	Wang Xin
Course Author Email	xin.wang@ntu.edu.sg
Course Title	Fintech in Investment Management
Course Code	BF2214
Academic Units	3
Contact Hours	39
Research Experience Components	

Course Requisites (if applicable)

Pre-requisites	AB1201
Co-requisites	
Pre-requisite to	
Mutually exclusive to	
Replacement course to	
Remarks (if any)	

Course Aims

This course introducesyou to several topics in financial technology (FinTech) and its applications in investment management.We will cover cryptocurrency and blockchain technology, innovations in the payment system, marketplace lending, and technology innovations in the insurance industry. The course will provide you with a comprehensive understanding of the business models under these innovations, the challenges FinTech firms face, and the major concerns financial regulators have. The course provides the necessary knowledge for those interested in a career in the FinTech industry, but it also helps you understand how financial technology innovations affect our daily lives. The course is a prescribed elective for all banking and finance students and an elective for all other NBS students.

Course's Intended Learning Outcomes (ILOs)

Upon the successful completion of this course, you (student) would be able to:

ILO 1	Compare the new business models of FinTech firms with traditional financial firms
ILO 2	Explain blockchain and distributed ledger technologies and their applications
ILO 3	Identify the impacts of innovations in the payment systems on banking and monetary policies

Course Content

- Cryptocurrency and Blockchain Technology
- Innovations in the Payment System
- Marketplace Lending and Crowdfunding
- Technology Innovations in the Insurance Industry
- Big Data and Machine Learning in Finance

Reading and References (if applicable)

There is no standard textbook in Fintech, but the following book is recommended for Bitcoin:

Narayanan, Arvind, Joseph Bonneau, Edward Felten, Andrew Miller, and Steven Goldfeder. Bitcoin and cryptocurrency technologies: a comprehensive introduction. Princeton University Press, 2016.

For other topics, I will distribute handouts in class. Some relevant articles are listed in the following, but it is not a comprehensive list and subject to change. You are not required to read all the articles.

Cong, Lin William, and Zhiguo He. Blockchain disruption and smart contracts. No. w24399. National Bureau of Economic Research, 2018.

Li, Jiasun, and William Mann. "Initial coin offering and platform building." (2018).

Vallee, Boris, and Yao Zeng. "Marketplace Lending: A New Banking Paradigm?." (2018).

Parlour, Christine A., Uday Rajan, and Johan Walden. "Making Money: Commercial Banks, Liquidity Transformation and the Payment System." (2017). Kahn, Charles M., and William Roberds. "Why pay? An introduction to payments economics." Journal of Financial Intermediation 18, no. 1 (2009): 1-23. Xu, Ting. "Learning from the crowd: The feedback value of crowdfunding." (2017). de Roure, Calebe, Loriana Pelizzon, and Anjan V. Thakor. "P2P lenders versus banks: Cream skimming or bottom fishing?." (2018). D'Acunto, Francesco, Nagpurnanand Prabhala, and Alberto Rossi. "The promises and pitfalls of robo-advising." (2017). Yuan, Yong, Feiyue Wang, Juanjuan Li, and Rui Qin. "A survey on real time bidding advertising." In Service Operations and Logistics, and Informatics (SOLI), 2014 IEEE International Conference on, pp. 418-423. IEEE, 2014

Planned Schedule

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
1	General Introduction to FinTech	LO1	Lecture Notes		
2	Bitcoin & Blockchain	LO2	Ch1, Ch2, Ch3 of Bitcoin and cryptocurrency technologies Lecture Notes		
3	Blockchain Applications & Smart Contracts on Ethereum	LO2	Lecture Notes		
4	E-learning Week. No Physical Class. Blockchain: Myth and Reality & Money in the Digital Age	LO1, LO2, LO3	Video		
5	Initial Coin Offering & Decentralized finance	LO1, LO2	Lecture Notes		
6	Payment Innovations & Quiz 1	LO1	Lecture Notes		
7	Crowdfunding and Peer-to-Peer Lending	LO1, LO3	Lecture Notes		
8	InsurTech	LO3	Lecture Notes		
9	Big Data and Machine Learning in Finance	LO1, LO2	Lecture Notes		
10	High-frequency Trading	LO1, LO2	Lecture Notes		

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
11	Robo-advisor & Second Quiz	LO1	Lecture Notes		
12	Digital Trade Finance	LO1	Lecture Notes		
13	Case Study Presentation	LO1, LO2, LO3			

Learning and Teaching Approach

Approach	How does this approach support you in achieving the learning outcomes?
Lectures	The interactive lecture session where there are ample opportunities for open discussion on the conceptual questions raised in the class allows you to think critically and share your ideas and concept with the class. Industry experts will be invited to give lectures on relevant topics.
Case Studies	Case studies would allow you to use the concepts learned in class on real-world examples, and practice teamwork and presentation skills.
Individual assignment(s)	The assignments require you to interpret the materials taught in class and can use them to analyze new problems.
In-Class discussions	In-class discussions are highly encouraged, which can allow you to think critically and practice communication skill.

Assessment Structure

Assessment Components (includes both continuous and summative assessment)

No.	Component	ILO	Related PLO or Accreditation	Weightage	Team/Individual	Rubrics	Level of Understanding
1	Continuous Assessment (CA): Test/Quiz(Two Quizzes (closed-book, multiple choice and essay questions))	1,2,3	Critical Thinking	30	Individual		
2	Continuous Assessment (CA): Project(Case Study Project (written report and in-class presentation) Report (team) - 20%Presentation (individual) - 10%)	1,2,3	Critical Thinking, Oral Communication, Teamwork and Interpersonal Skills_x000D_	30			
3	Continuous Assessment (CA): Assignment(Homework Assignments (multiple))	ILO1, ILO2, ILO3	Problem Solving and Decision Making	30	Individual		
4	Continuous Assessment (CA): Class Participation(Class Participation)	1,2,3	Class Participation	10	Individual		

Description of Assessment Components (if applicable)

Notes:
1.Each group only needs to submit one written report, but all members have topresent a part of your case study in the last class.
2.Peer EvaluationInstructions

All members are required to complete a peer evaluation for each member of the team (i.e., including a self-assessment). The completed peer evaluation form must be submitted individually to the instructor immediately after the team project has been submitted for grading. Identity of appraisers will be kept confidentialand will not be revealed to other team members.

We will use a member's ratings (on a scale ranging from 1 to 7) to award marks for the team project to other members by computing the average rating that a member receives from other members (i.e., excluding each member's self-rating). Each member will be informed of his/her average rating. A member's mark for the team project will be computed as follows:
1.If a member's average rating is ≥ 4, the member will receive 100%of the overall mark awarded to the team project.
2.If a member's average rating is < 4 but ≥ 3, the member will receive 80%of the overall mark awarded to the team project.
3.If a member's average rating is < 3 but ≥ 2, the member will receive 50%of the overall mark awarded to the team

project.
4.If a member's average rating is < 2, the member will receive 30%of the overall mark awarded to the team project.

A member who has concerns with the ratings given by other team members and/or his/her average rating should immediately consult his/her instructor upon receiving his/her peer evaluation feedback.

Formative Feedback

You will receive both written and verbal feedback from me about your group case studies and presentations. You will also receive written feedback in response to your homework assignments and take-home exams. I will also give oral feedback through in-class discussion.

NTU Graduate Attributes/Competency Mapping

This course intends to develop the following graduate attributes and competencies (maximum 5 most relevant)

Attributes/Competency	Level
Collaboration	Advanced
Communication	Basic
Curiosity	Intermediate
Learning Agility	Basic
Critical Thinking	Basic

Course Policy

Policy (Academic Integrity)

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values. As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the academic integrity website for more information. On the use of technological tools (such as Generative AI tools), different courses / assignments have different intended learning outcomes. Students should refer to the specific assignment instructions on their use and requirements and/or consult your instructors on how you can use these tools to help your learning. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

Policy (General)

You are expected to complete all assigned pre-class readings and activities, attend all seminar classes punctually and take all scheduled assignments and tests by due dates. You are expected to take responsibility to follow up with course notes, assignments and course related announcements for seminar sessions they have missed. You are expected to participate in all seminar discussions and activities.

Policy (Absenteeism)

Absence from class without a valid reason will affect your overall course grade. Valid reasons include falling sick and participation in NTU's approved activities supported by an excuse letter from the relevant bodies.

If you miss a lecture, you must inform the course instructor via email prior to the start of the class.

Policy (Others, if applicable)

Last Updated Date: 26-07-2024 06:42:22

Last Updated By: Wang Xin (Asst Prof)