

**City University of Hong Kong
Course Syllabus**

**offered by Department of Information Systems
with effect from Semester A 2018 / 19**

Part I Course Overview

Course Title: Blockchain Technology and Business Applications

Course Code: IS6200

Course Duration: One Semester (13 weeks)

Credit Units: 3

Level: P6

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

The course will cover blockchain technologies, distributed ledger technology, cryptocurrencies (e.g., Bitcoin), and their applications, implementation and security concerns. Students will learn how these systems work; analyse the security and regulation issues relating to blockchain technologies; and understand the impact of blockchain technologies on financial services and other industries.

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.	Explain the concepts of cryptocurrency, blockchain, and distributed ledger technologies	20%			
2.	Analyse the application and impact of blockchain technology in the financial industry and other industries	30%	✓	✓	
3.	Evaluate security issues relating to blockchain and cryptocurrency	25%	✓	✓	
4.	Design and analyse the impact of blockchain technology in other markets	25%			
		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 self-life problems.

A3: Accomplishments

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

3. Teaching and Learning Activities (TLAs)

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

TLA	Brief Description	CILO No.				Hours/week (if applicable)
		1	2	3	4	
TLA1 : Lecture	Concepts, frameworks, and technologies of blockchain and cryptocurrency are explained.	✓		✓		
TLA2 : Cases studies	Students are required to analyse how blockchain technology be used in different industries and evaluate its impact on businesses.	✓	✓	✓	✓	
TLA 3 : Online discussion	It is a means of self-reflection and sharing concepts, techniques, and methods of knowledge management among students within or after formal classes.	✓	✓	✓	✓	

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	4		
Continuous Assessment: 100%						
<u>AT1: Participation</u> Students should participate in class activities, such as small group discussions and presentations, self- reflection, raise and answer questions, and the like. Class participation is used to assess students' understanding of the topics and their abilities to apply the knowledge and concepts taught in class.	✓	✓	✓	✓	20%	
<u>AT2: Individual Assignments</u> Students will answer questions and solve problems in the area of blockchain technologies and applications.	✓	✓	✓	✓	40%	
<u>AT3: Group Project</u> A group project is developed to allow students to apply the concepts and tools learned in the course via hands-on experiences. A project report will be required to illustrate the outcomes of the group project that develops blockchain technologies and applications.	✓	✓	✓	✓	40%	
					100%	

5. Assessment Rubrics

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

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
AT1: Participation	Ability to show initiative and interactions in raising sensible questions and giving insightful discussion of issues relating to the course topics in class.	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT2: Individual Assignments	Ability to demonstrate understanding of the course topics through assignments.	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT3: Group Project	Ability to frame the problem to the models learned in the class and push the ability of the model to a high level in tackling the problem.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to contribute to the project and deal with issues in collaboration.	High	Significant	Moderate	Basic	Not even reaching marginal levels

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

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

Blockchain, Cryptocurrency, Blockchain Technology.

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.	Nil
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2.2 Additional Readings

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

1.	Don Tapscott, Alex Tapscott. <i>Blockchain Revolution: How the Technology Behind Bitcoin is Changing Money, Business, and the World.</i> Portfolio / Penguin (May 10, 2016)
2.	William Mougayar. <i>The Business Blockchain: Promise, Practice, and Application of the Next Internet Technology.</i> Wiley; 1st edition (May 9, 2016)
3.	Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller, and Steven Goldfeder. <i>Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction.</i> Princeton University Press (July 19, 2016)
4.	Andreas M. Antonopoulos. <i>Mastering Bitcoin: Unlocking Digital Cryptocurrencies.</i> O'Reilly Media; 1st edition (December 20, 2014)

2.3 Online Resources:

Readings will be augmented by pertinent journal/newspaper/magazine articles.