City University of Hong Kong
Course Syllabus

offered by College of Business
with effect from Semester A 2022/23

Part I Course Overview

Course Title:	AI and Blockchain Application in Business
Course Code:	FB6778A
Course Duration:	One semester
Credit Units:	2
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)*	FB6778B

Part II Course Details

1. Abstract

Students will learn how to use AI software to conduct descriptive, predictive, diagnostic, or prescriptive analytics for a selected topic and how blockchain application solves the pain points of a selected industry.

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 AI and Blockchain	40%	√	√	√
2.	Analyse the application and impact of AI and blockchain technology in various industries	30%	√	√	√
3.	Design and analyse the impact of AI and blockchain technology in various markets	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 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				
Lecture	Concepts, frameworks, and technologies of AI and blockchain are explained.	√	√	√				
Case Studies	Students are required to analyse how AI and blockchain technology be used in different industries and evaluate its impact on businesses.	√	√	√				
In-class activities	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					
Continuous Assessment: _100___%								
Individual Assignment	√	√	√				50%	
Group Assignment	√	√	√				50%	
Examination:____% (duration: , if applicable)								
							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)	Marginal (B-, C+, C)	Failure (F)
Individual Assignment	Ability to demonstrate understanding of the course topics through assignment.	Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.	Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.	Student who is profiting from the university experience; understanding of the subject; ability to develop solutions to simple problems in the material.	Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.
Group Assignment	Synthesize concepts and tools learned from this course	Demonstrate strong ability to synthesize concepts and tools learned in the group assignments	Demonstrate good ability to synthesize concepts and tools learned in the group assignments	Demonstrate acceptable ability to synthesize concepts and tools learned in the group assignments	Demonstrate poor ability to synthesize concepts and tools learned in the group assignments

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
Individual Assignment	Ability to demonstrate understanding of the course topics through assignment.	Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.	Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.	Student who is profiting from the university experience; understanding of the subject; ability to develop solutions to simple problems in the material.	Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.	No evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature
Group Assignment	Synthesize concepts and tools learned from this course	Demonstrate strong ability to synthesize concepts and tools learned in the group assignments	Demonstrate good ability to synthesize concepts and tools learned in the group assignments	Demonstrate acceptable ability to synthesize concepts and tools learned in the group assignments	Demonstrate poor ability to synthesize concepts and tools learned in the group assignments	Demonstrate unacceptable ability to synthesize concepts and tools learned in the group assignments

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.)

1. Fundamentals of Machine Learning (ML) and Artificial Intelligence (AI)
2. AI-Powered Descriptive and Predictive Analytics
3. AI-Powered Prescriptive and Diagnostics Analytics
4. Unstructured Data, Big Data, and AI
5. Fundamentals of Distributed Ledgers, Blockchain, and Bitcoins
6. Ethereum and Decentralized Finance
7. Blockchain as a Service (BaaS) and Hyperledger Foundation
8. Blockchain and Applications in Supply Chain and Healthcare Management

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.)

NIL

2.2 Additional Readings

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

1.	Practical Artificial Intelligence and Blockchain: A Guide to Converging Blockchain and AI to Build Smart Applications for New Economies. Packt Publishing, 2020.
2.	Sachan, D. Fundamentals of Blockchain. Independently published, 2021
3.	Zwingmann, Tobias. AI-Powered Business Intelligence. Sebastopol: O'Reilly Media, Incorporated, 2022.