FB6778A: AI AND BLOCKCHAIN APPLICATION IN BUSINESS

Effective Term
Semester B 2024/25

Part I Course Overview

Course Title
AI and Blockchain Application in Business

Subject Code
FB - College of Business (FB)
Course Number
6778A

Academic Unit
College of Business (CB)

College/School
College of Business (CB)

Course Duration
One Semester

Credit Units
2

Level
P5, P6 - Postgraduate Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
FB6778B

Part II Course Details

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.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain the concepts of AI and Blockchain	40	x	x	x
2	Analyse the application and impact of AI and blockchain technology in various industries	30	x	x	x
3	Design and analyse the impact of AI and blockchain technology in various markets	30	x	x	x

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 artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture	Student will identify the concepts, frameworks, and technologies of AI and blockchain.	1, 2, 3	
2	Case Studies	Students will engage in case studies to analyse how AI and blockchain technology be used in different industries and evaluate its impact on businesses.	1, 2, 3	
3	In-class activities	Students will demonstrate the self-reflection sharing of concepts, techniques, and methods of knowledge management among students within or after formal classes.	1, 2, 3	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Individual Assignment	1, 2, 3	50	
2	Group Assignment	1, 2, 3	50	

Continuous Assessment (%)

100

Assessment Rubrics (AR)

Assessment Task

Individual Assignment (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to demonstrate understanding of the course topics through assignment.

Excellent

(A+, A, A-) Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

Good

(B+, B, B-) Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.

Fair

(C+, C, C-) Student who is profiting from the university experience; understanding of the subject; ability to develop solutions to simple problems in the material.

Marginal

(D) Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.

Failure

(F) No evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature

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Assessment Task

Group Assignment (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Synthesize concepts and tools learned from this course

Excellent

(A+, A, A-) Demonstrate strong ability to synthesize concepts and tools learned in the group assignments

Good

(B+, B, B-) Demonstrate good ability to synthesize concepts and tools learned in the group assignments

Fair

(C+, C, C-) Demonstrate acceptable ability to synthesize concepts and tools learned in the group assignments

Marginal

(D) Demonstrate poor ability to synthesize concepts and tools learned in the group assignments

Failure

(F) Demonstrate unacceptable ability to synthesize concepts and tools learned in the group assignments

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Assessment Task

Individual Assignment (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to demonstrate understanding of the course topics through assignment.

Excellent

(A+, A, A-) Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

Good

(B+, B) Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.

Marginal

(B-, C+, C) Student who is profiting from the university experience; understanding of the subject; ability to develop solutions to simple problems in the material.

Failure

(F) Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.

Assessment Task

Group Assignment (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Synthesize concepts and tools learned from this course

Excellent

(A+, A, A-) Demonstrate strong ability to synthesize concepts and tools learned in the group assignments

Good

(B+, B) Demonstrate good ability to synthesize concepts and tools learned in the group assignments

Marginal

(B-, C+, C) Demonstrate acceptable ability to synthesize concepts and tools learned in the group assignments

Failure

(F) Demonstrate poor ability to synthesize concepts and tools learned in the group assignments

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Part III Other Information

Keyword Syllabus

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 and Big Data

5. Fundamentals of Distributed Ledgers, Blockchain, and Bitcoins
6. Ethereum and Decentralized Finance (DeFi)
7. Blockchain as a Service (BaaS) and Hyperledger Foundation
8. Blockchain and Applications in Supply Chain and Healthcare Management

Reading List

Compulsory Readings

	Title
1	Nil

Additional Readings

	Title
1	Harvey, C. R., Ramachandran, A., & Santoro, J. DeFi and the Future of Finance. Hoboken, New Jersey: John Wiley & Sons, 2021.
2	Kumble, G.P., Practical Artificial Intelligence and Blockchain: A Guide to Converging Blockchain and AI to Build Smart Applications for New Economies. Packt Publishing, 2020.
3	Lacity M. C. Blockchain Fundamentals for Web 3.0. Chicago: Epic Books, 2022.
4	Namasudra S. and Deka G.C. Applications of blockchain in healthcare. Singapore: Springer Singapore Pte. Ltd., 2021.
5	Sachan, D. Fundamentals of Blockchain. Independently published, 2021
6	Zwingmann Tobias. AI-Powered Business Intelligence. Sebastopol: O'Reilly Media, Incorporated, 2022.