

# FB6778B: AI AND BLOCKCHAIN APPLICATION IN BUSINESS

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## 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

6778B

### Academic Unit

College of Business (CB)

### College/School

College of Business (CB)

### Course Duration

One Semester

### Credit Units

3

### Level

P5, P6 - Postgraduate Degree

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

Nil

### Precursors

Nil

### Equivalent Courses

Nil

### Exclusive Courses

FB6778A

## Part II Course Details

### Abstract

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

### 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 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 &amp; 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

**Assessment Task**

Group Assignment (for students admitted before Semester A 2022/23 and in Semester A 2024/25 &amp; 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.

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### **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 Predictive 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.