هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد NCAAA T4 2020

Course Specifications

Course Title:	Finance of Artificial Intelligence and Fintech
Course Code:	FIN 432
Program:	BSc. Finance
Department:	Finance
College:	College of Business Administration
Institution:	Prince Sultan University

Table of Contents

A. Course Identification

1. Credit hours:	
2. Course type	
a. University ☐ College ☐ Department ☒ Others ☐	
b. Required ☐ Elective ☒	
3. Level/year at which this course is offered:	**Undergraduate Level 4**
4. Pre-requisites for this course (if any)**:**	**FIN 320 , FIN 335**
5. Co-requisites for this course (if any)**: N/A**	

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	45	100
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	45
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description

This course introduces students to the world of Artificial Intelligence (AI) and Financial Technology (Fintech). The course is designed to equip students with the knowledge and tools necessary to analyze financial data and to enhance efficiency in developing and delivering financial services. Students are introduced to the basics of Fintech through the lens of finance theory. The course helps students develop a deep understanding of the link between AI and Fintech by exploring the concepts and instruments widely used in today's financial world, such as Blockchain technology, crypto currencies, etc.

2. Course Main Objective

Upon completion of this course, the student will be able to:

- Explain the concepts related to artificial intelligence (AI) and financial technology (Fintech).
- Understand various techniques and tools for the AI-driven data to be used in Fintech.
- Examine how AI and Fintech can empower the financial service sector.
- Explain instruments such as Blockchain, Crypto currency, high-frequency trading, etc.
- Demonstrate responsibility via report writing and presentation on AI and Fintech concepts.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Explain the statistical concepts related to artificial intelligence (AI).	**PLO 1**
1.2	Explain the theoretical concepts behind financial technology (Fintech).	**PLO 1**
1.3		
1...		
2	**Skills :**	
2.1	Analyze the tools employed in AI-driven data used in Fintech.	**PLO 2**
2.2	Distinguish how AI and Fintech can empower the financial service sector.	**PLO 2**
2.3	Estimate the efficiency gained through AI-driven instruments used in Fintech.	**PLO 3a**
2...		
3	**Values:**	
3.1	Demonstrate responsibility through report writing and presentation.	**PLO 4a&b**
3.2	Ability to collect, analyze and interpret big financial data	**PLO 5**
3.3		
3...		

C. Course Content

No	List of Topics	Contact Hours
1	Artificial Intelligence: Types of Data & Learning	3
2	Finance and Artificial Intelligence	6
3	Data-Driven Finance	6
4	Algorithimic Trading	3
5	Risk Management	3
6	AI-Based Competition	3
7	Understanding Fintech from a Macroeconomic Perspective	6
8	Crypto Assets (Cryptocurrencies) and Central Bank Digital Currencies	6
9	The Impact of Fintech on Existing Financial Institutions	6
10	Reconciling AI and Fintech	3
Total		45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Explain the statistical concepts related to artificial intelligence (AI).	Lectures and Theoretical Discussions	Exams, quizzes and class activities.
1.2	Explain the theoretical concepts behind financial technology (Fintech).	Lectures and Theoretical Discussions	Exams, quizzes and class activities.
…			
2.0	**Skills**		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
2.1	Analyze the tools employed in AI-driven data used in Fintech.	Lectures and Theoretical Discussions	Exams, quiz and assignments.
2.2	Distinguish how AI and Fintech can empower the financial service sector.	Lectures and Theoretical Discussions	Exams, quiz and assignments.
2.3	Estimate the efficiency gained through AI-driven instruments used in Fintech.	Lectures, Theoretical Discussions and Problem Solving	Exams, quiz and assignments.
3.0	**Values**		
3.1	Ability to communicate effectively through written work and oral presentation	Model Solving	Assignments/Project
3.2	Ability to collect, analyze and interpret big financial data.	Model Solving	Assignments/Project
…			

2. Assessment Tasks for Students

#	*Assessment task	Week Due	Percentage of Total Assessment Score
1	Major Exam 1	Week 6	%20
2	Project: Financial Market Analysis	Week 14	%20
3	Major Exam 2	Week 12	%20
4	Final Exam	TBA	%40
	Total		%100

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice:
Weekly 2 hours of academic advising, 4 hours of office hours and any other time when the instructor is available.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	1. ***Artificial Intelligence in Finance***. By Yves Hilpisch. 2020: O'Reilly Media, Inc. 2. ***The Economics of Fintech.*** Edited by Kaji, Sahoko, Nakatsuma, Teruo, Fukuhara, Masahiro. 2021: Springer
Essential References Materials	Monetary Policy Reports from ECB and US Federal Reserves on cryptocurrencies and CBDC.
Electronic Materials	Forex Market Trading Terminals.
Other Learning Materials	Online sources.

2. Facilities Required

Item	Resources
Accommodation Classrooms, laboratories, demonstration) (.rooms/labs, etc	.Enough space and seats to accommodate students
Technology Resources AV, data show, Smart Board, software,) (.etc	.Smart Board, Microsoft Office and Internet Connection
Other Resources Specify, e.g. if specific laboratory) equipment is required, list requirements or (attach a list	MSExcel

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of Teaching & Assessment	Students/the Chair	Direct & Indirect
Extent of achievement of CLOs	Students	Indirect
Quality of learning resources	Students	Direct

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	