City University of Hong Kong
Course Syllabus

offered by Department of Accountancy
with effect from Semester A 2020/21

Part I Course Overview

Course Title:	Artificial Intelligence Accounting
Course Code:	AC6761P
Course Duration:	Intensive mode: 3 days
Credit Units:	1.5
Level:	P6
Medium of Instruction:	Putonghua supplemented by English
Medium of Assessment:	Chinese
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

This course is designed for students taking accountancy and finance studies who are interested to learn how to manage data, conduct business analytics, apply AI model to automate accounting and assurance processes and develop predictive model to increase profitability or return. It is oriented to enhance their technical skillset.

The aim of this course is to provide a broad understanding on how to manage data, the process of preparing data for analysis, basics of analytics, using AI to automate financial analysis process and generate accounting reports. This course will equip students with the ability to apply customized solutions to make informed business decisions, integrate statistical libraries for data analysis, develop AI models to automate accounting and assurance process. This course will provide students with case analysis to enhance the proper direction and process in applying AI in the accounting and related functions

This course aims to:

1. provide students with knowledge of AI and its role in accounting and business;
2. develop students' ability to model business processes and develop accounting information database;
3. manage data to sufficiently derive, analyze, communicate analytics outcome and eventually apply AI models in accounting and related functions

Objectives of the course:

At the completion of this course, students should be able to:

1. Appreciate the contemporary developmental process of AI models and mechanism with reference to the accounting and related practices.
2. Identify possible utilization of AI techniques and models in existing and forecasted accounting, finance and related functions
3. Visualize the current progress and outcome in the professional and business sector in the application of AI models and identify the causes and moderating factors thereof.
4. Develop communication and presentation skills in demonstrating AI accounting to potential users in the accounting and business sector

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.	Appreciation of Contemporary Development of AI Models in Accounting and Related Functions		✓	✓	
2.	Identified AI Techniques and Models in Accounting and Finance		✓	✓	
3.	Visualize the Application Progress of AI Techniques and Models in Accounting and Finance Functions		✓	✓	
4.	Develop Communication and Presentation Skills to Potential Users of AI Accounting		✓	✓	
		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	
Interactive seminars	Interactive seminars focusing on the development of AI knowledge, analytical and communication skills and modelling capabilities through the analysis and application of AI in accounting.	✓	✓	✓	✓	
Lectures and case analyses	Lectures and associated in case analyses and problem solutions related to AI in accounting and business.	✓	✓	✓	✓	
Project and case analysis#	Students will undertake discovery project case on special AI application in accounting with an accounting firm or business organization to identify possible solutions for the case corporation			✓		

 # DEC TLA element

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: 60%						
Group project # Students are required to analyse the effectiveness of application of artificial intelligence accounting in various perspective in accounting and assurance	✓	✓	✓	✓	30%	
In-class case discussion, analysis and presentation Students need to identify the issues and problems in various studied cases and identify the possible solutions in each case with clear presentation	✓	✓	✓	✓	20%	
Interactive participation and quizzes Students need to actively participate in class discussion on concepts and practices of artificial intelligence accounting, and to give proper answers to quizzes conducted by the lecturer	✓	✓	✓		10%	
Examination: 40% (duration: one 3-hour exam)						
Final examination Students are required to answer all the essay and case questions set in the examination paper	✓	✓	✓	✓	40%	
					100%	

 # DEC AT element

Students are required to pass both coursework and examination components in order to pass the course.

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)**
1.	Group project	ABILITY to identify problems faced the project corporation and identified reasonable solutions in AI applications	High	Significant	Moderate	Basic	Not even reaching marginal levels
2.	In-class case discussion, analysis and presentation	ABILITY to appreciate the orientation, problems, moderating factors and solutions in precedent cases	High	Significant	Moderate	Basic	Not even reaching marginal levels
3.	Interactive participation and quizzes	ABILITY to actively participate in interactive discussions and contribute to the discovery of contemporary knowledge and possible developments	High	Significant	Moderate	Basic	Not even reaching marginal levels
4.	Final examination	ABILITY to provide good analysis of conceptual and case questions and demonstrate excellent presentation on the provided answers	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.)

Artificial Intelligence, Concept and Development History, Computerization and Automation, Robotics in Business and Accounting, Reasoning and Self-Learning Process, Contemporary AI Accounting Practices, Expert Systems, AI in the Finance Sector, Cost Benefit Analysis and Assessment, Obstacles and Challenges in AI Applications, Forecasted Future Development.

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. **Superminds,** Thomas Malone**,** MIT Center for Intelligence Collection (2019)

2. **Delivery Notes from Course Lecturers**

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

1. **Artificial Intelligence in Accounting and Auditing: Towards New Paradigms,** Artificial Intelligence in Accounting and Auditing, Volume 4, Miklos A. Vasarhelyi and Alex Kogan (1977)

2. Superminds, how humans and machines can work together, Deloitte Review, Issue 24, Pages 120 – 131 (January 2019)