1. General Information

Course Subject	ACCT
Course Number	3112
Course Title	Accounting Data Management and Analytics
Academic Years	2024-2025
Grading Method	Letter

2. Instructors

Professor KIM, Doyeon
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Subclasses: 2E

4. Course Description

Course Description	This course is about descriptive and predictive analysis of data as it pertains to accounting and finance professionals. In the era of "big data," the volume, pace, and complexity of data have made it difficult to understand and use data. At the same time, the explosion of data has brought many opportunities for firms to get deeper insights into many aspects of their businesses. To harness excessive information, data analytics has become a must-have skill for all business managers and particularly accountants who often know both internal and external data, better than their counterparts in other areas of the business. This course will prepare students with fundamental analytics skills focused on accounting applications. Students will also gain hands-on experience with data analysis. The students will first be exposed to why analytics is important in the accounting profession and learn about how financial and accounting data is generated and stored in modern Accounting Information Systems (AIS). Students will learn to use a statistical computing software (R) to perform the analysis. Students will learn to build queries to pull data from AIS or databases, learn to perform descriptive analytics using various data visualization techniques, and identify potential problems and relevant issues. Students will also learn about entry to medium level predictive accounting models and their practical applications such as performance forecasting and credit scoring.
Prerequisites	STAT1602 Business Statistics or STAT1603 Introductory Statistics or ECON1280 Analysis Of Economic Data or IIMT1640 Probability and Statistics for Business and ACCT1101 Introduction to Financial Accounting

5. Course Objectives

1. Learn how financial, managerial accountants, and auditors can benefit from using data analytics

2. Understand how accounting data are generated, collected, stored, and shared by technology

3. Learn how to perform data-driven financial analysis and visualize data to provide clear financial/managerial insights

4. Learn how to use computational language to perform data analytics

5. Explore how predictive accounting models are used in accounting applications

6. Faculty Learning Goals

Goal 1: Acquisition and internalization of knowledge of the programme discipline

Goal 2: Application and integration of knowledge

Goal 3: Inculcating professionalism

Goal 4: Developing global outlook

Goal 5: Mastering communication skills

Goal 6: Cultivating leadership

7. Course Learning Outcomes

Course Teaching and Learning Activities	Aligned Faculty Learning Goals					
	1	2	3	4	5	6
CLO1. Solve accounting and finance related problems using data analytic tools	✔	✔	✔	✔		
CLO2. Understand the value of data in accounting profession and how both financial and managerial accountants can benefit from using data analytics	✔	✔	✔	✔		
CLO3. Understand how to use statistical analytical models and artificial intelligence methods to perform data analysis.	✔	✔		✔		
CLO4. Create visualizations of data to provide managerial insights into associations, relationships, outliers, and other data intimations related to accounting information.		✔		✔	✔	

8. Course Teaching and Learning Activities

Course Teaching and Learning Activities #	Expected Study Hours	Study Load (% of study)
T&L1. Lecture with interactive presentation	36	30
T&L2. Tutorial and e-forum discussions	12	10
T&L3. Case-based study and analysis	30	25
T&L4. Self study	42	35
	Total: 120	Total: 100

9. Assessment Methods

Assessment Methods	Description	Weight %	Aligned Course Learning Outcomes
A1. In-class Activities/ Discussion	Participation in in-class exercises.	20%	1,3,4
A2. Individual Take-home Assignment	Written assignments involving data analysis	40%	1,2,3,4
A3. Project (Group)— Presentation	Case study to do analysis and synthesis of the chosen current issues of the student field.	40%	1,2,3,4

Assessment Rubrics

A2. Individual Take-home Assignment	
A+,A,A-	● High participation in discussions ● Always attend in-class discussions ● Demonstrate a strong understanding of all relevant knowledge ● Handling questions professionally ● Present arguments that have an element of originality ● Respect others and follow the class rules (no chatting and do not use cell phone)
B+,B,B-	● Good participation in discussions ● Often attend the in-class discussions ● Demonstrate a good understanding of all relevant knowledge ● Handling questions in a logical way ● Present arguments that go beyond the lecture and textbook ● Respect others and follow the class rules (no chatting and do not use cell phone)
C+,C,C-	● Some participation in discussions ● Sometimes attend the in-class discussions ● Demonstrate a basic understanding of the concepts involved ● Fairly address questions as set ● Present arguments in a well-structure manner ● Respect others and follow the class rules (no chatting and do not use cell phone)
D+,D	● Minimal or no participation in discussions ● Rarely attend the in-class discussions ● Demonstrate a minimum understanding of the concepts involved ● Barely address questions as set ● Present arguments in a marginally acceptable manner ● Respect others and follow the class rules (no chatting and do not use cell phone)
F	● Minimal or no participation in discussions ● Almost never attend the tutorials and in-class discussions ● Demonstrate a poor understanding of the concepts involved ● Unable or unwilling to handle questions ● Present arguments poorly ● Behave poorly in class (often chatting with others, using cell phones, or being late)
A3. Project (Group)— Presentation	
A+,A,A-	● Demonstrate a strong understanding of all relevant knowledge ● Handling questions professionally ● High participation in discussions and volunteering answering/asking questions

Assessment Rubrics	
	● Present arguments that have an element of originality ● Achieve a standard of excellent performance in the exams with very accurate computation and very good analytical and problem solving skills ● Excellent writing report and presentation
B+,B,B-	● Demonstrate a good understanding of all relevant knowledge ● Handling questions in a logical way ● Good participation in discussions ● Present arguments that go beyond the lecture and textbook ● Achieve a standard of good performance in the exams with accurate computation and good analytical and problem solving skills ● Good writing report and presentation
C+,C,C-	● Demonstrate a basic understanding of the concepts involved ● Fairly address questions as set ● Some participation in discussions ● Present arguments in a well-structure manner ● Meet a standard of acceptable performance in the exams with reasonably accurate computation and acceptable analytical and problem solving skills ● Acceptable writing report and presentation
D+,D	● Demonstrate a minimum understanding of the concepts involved ● Barely address questions as set ● Minimal or no participation in discussions ● Present arguments in a marginally acceptable manner ● Meet a standard of marginally acceptable performance in the exams with some errors in computation and barely adequate analytical and problem solving skills ● Marginally acceptable writing report and presentation
F	● Demonstrate a poor understanding of the concepts involved ● Unable or unwilling to handle questions ● Minimal or no participation in discussions ● Present arguments poorly ● Fail to meet a standard of passing the exams with major errors in computation and inadequate analytical and problem solving skills ● Poorly writing report and presentation

10. Course Grade Descriptors

A+,A,A-	● Demonstrate a strong understanding of all relevant knowledge ● Handling questions professionally ● High participation in discussions and volunteering answering/asking questions ● Present arguments that have an element of originality ● Achieve a standard of excellent performance in the exams with very accurate computation and very good analytical and problem solving skills ● Excellent writing report and presentation
B+,B,B-	● Demonstrate a good understanding of all relevant knowledge ● Handling questions in a logical way ● Good participation in discussions ● Present arguments that go beyond the lecture and textbook ● Achieve a standard of good performance in the exams with accurate computation and good analytical and problem solving skills ● Good writing report and presentation
C+,C,C-	● Demonstrate a basic understanding of the concepts involved ● Fairly address questions as set ● Some participation in discussions ● Present arguments in a well-structure manner ● Meet a standard of acceptable performance in the exams with reasonably accurate computation and acceptable analytical and problem solving skills

10. Course Grade Descriptors

		● Acceptable writing report and presentation
	D+,D	● Demonstrate a minimum understanding of the concepts involved ● Barely address questions as set ● Minimal or no participation in discussions ● Present arguments in a marginally acceptable manner ● Meet a standard of marginally acceptable performance in the exams with some errors in computation and barely adequate analytical and problem solving skills ● Marginally acceptable writing report and presentation
	F	● Demonstrate a poor understanding of the concepts involved ● Unable or unwilling to handle questions ● Minimal or no participation in discussions ● Present arguments poorly ● Fail to meet a standard of passing the exams with major errors in computation and inadequate analytical and problem solving skills ● Poorly writing report and presentation

11. Course Content and Tentative Teaching Schedule

Topic/ Session	Content
1	Course overview: What is data analytics and how is it important to accountants?
2	Introduction to R
3	Data Manipulation
4	Visualization
5	Statistical Analysis
6	Binary Classification
7	Machine Learning

13. Means / Processes for Student feedback on Course

	Conducting mid-term survey in additional to SETL around the end of the semester
	Online response via Moodle site
	Others

14. Course Policy

An orderly learning environment is extremely important for this course. Disruptive behaviors are inconsiderate to other students as well as to the instructor, and are absolutely unacceptable. Talking during lectures, arriving to class late, and any other disruptions of mobile devices are not allowed; students who are responsible for any of these actions will be subject to academic penalty and will be asked to leave the classroom.

Any dishonesty—such as cheating, false representation, plagiarism, etc.—that comes to my attention will result in an F in the course.

Academic dishonesty includes cheating, plagiarism, unauthorized collaboration, falsifying academic records, and any act designed to avoid participating honestly in the learning process. Scholastic dishonesty also includes, but is not limited to, providing false or misleading information to receive a postponement or an extension on an exam or other assignment. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the Disciplinary Committee Regulations (http://www.hku.hk/pubunit/cal99/104f.htm). By teaching this course, I have agreed to observe all of the faculty responsibilities described in that document. By enrolling in this class, you have agreed to observe all of the student responsibilities described in that document. If the application of that policy statement to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification.

Students are encouraged to give feedback on the course through mid-term survey in additional to SETL around the end of the semester and online interaction via Moodle site.

15. Additional Course Information

Software Tools Used in This Course
1. R
2. MYOB