HKU BUSINESS SCHOOL
港大經管學院

Inspire·Empower·Lead

1. General Information

Course Subject	MKTG
Course Number	3530
Course Title	Big Data Marketing
Academic Years	2023-2024
Grading Method	Letter

2. Instructors

Professor Cao,Jingcun
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Subclasses: 2A

4. Course Description

Course Description	With marketers poised to be the largest users of data within an organization, there is a need to make sense of the variety of consumer data that the organization collects, especially in the era of big data. This course exposes students to essential tools including data visualization, exploratory data analysis, as well as regression methods that can be used to convert raw data into marketing insights. For example, these tools will be used to investigate the impact of marketing activity on Aggregate data (e.g., sales) and on individual assignments conducted using Tableau and Microsoft Excel, ensuring that students will acquire the needed capabilities and skills to extract information from the big data available to them.
Prerequisites	MKTG2501: Introduction to Marketing

5. Course Objectives

1. To build a conceptual understanding of big data used in business.

2. To learn hands-on, working knowledge of data visualization and analysis methods used by business intelligence analysts.

3. To identify and critically evaluate implications of business decisions for organizational stakeholders and the natural environment.

4. To apply the knowledge and tools of quantitative analysis and modeling to make recommendations and business decisions.

5. To learn to communicate marketing insights derived from big data effectively by employing multiple media.

6. Faculty Learning Goals

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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. Understand data structures and types of variables	✔	✔					
CLO2. Visualize and communicate key information of the available marketing data with Tableau	✔	✔	✔				
CLO3. Identify relevant statistical tools for a given marketing problem based on the available marketing data	✔	✔	✔				
CLO4. Implement the statistical analysis using the Excel	✔	✔	✔				
CLO5. Understand how to interpret the statistical software package's output for the implemented statistical tool in solving the marketing problem	✔	✔	✔	✔	✔	✔	
CLO6. Communicate the results of the data analysis to aid business stakeholders in making marketing decisions	✔	✔	✔	✔	✔	✔	

8. Course Teaching and Learning Activities		
Course Teaching and Learning Activities #	Expected Study Hours	Study Load (% of study)
T&L1. Interactive lectures with exercises/discussions	36	30
T&L2. Data visualization and analysis assignments	12	10
T&L3. Group meeting and discussions	12	10
T&L4. Final Project—presentation and written Report	40	33.3
T&L5. Self-study	20	16.7
	Total: 120	Total: 100

9. Assessment Methods			
Assessment Methods	Description	Weight %	Aligned Course Learning Outcomes
A1. Participation	Attendance and participation	10%	1,5
A2. Individual Assignments	2 individual assignments	20%	1,2,3,4

9. Assessment Methods			
A3. Group Project	Presentation (15%) Written Report (15%)	30%	1,2,3,4,5,6
A4. Final Test	Closed-book format	40%	1,2,3,4
A5. Final Exam		0%	

10. Course Grade Descriptors	
A+,A,A-	Outstanding performance on all (or almost all) learning outcomes. Demonstrates the ability to synthesize and apply the principles or subject matter learnt inthe course, to novel situations and/or in novel ways, in a manner that would surpass the normal expectation at this level, and typical of standards that may be common at higher levels of study or research. Has the ability to express the synthesis of ideas or application in a clear and cogent manner.
B+,B,B-	Substantial performance on all learning outcomes, OR high performance on some learning outcomes which compensates for less satisfactory performance on others, resulting in overall substantial performance. Demonstrates the ability to state and apply the principles or subject matter learnt in the course to familiar and standard situations in a manner that is logical and comprehensive. Has the ability to express the knowledge or application with clarity.
C+,C,C-	Satisfactory performance on the majority of learning outcomes, possibly with a few weaknesses. Demonstrates the ability to state and partially apply the principles or subject matter learnt in the course to most (but not all) familiar and standard situations in a manner that is usually logically persuasive. Has the ability to express the knowledge or application in a satisfactory and unambiguous way.
D+,D	Barely satisfactory performance on a number of learning outcomes. Demonstrates the ability to state and sometimes apply theprinciples or subject matter learnt in the course to some simple and familiar situations in a manner that is broadly correct in its essentials Has the ability to state the knowledge or application in simple terms.
F	Unsatisfactory performance on a number of learning outcomes, OR failure to meet specified assessment requirements. Candidate demonstrated little evidence of basic familiarity with the assignment questions and relevant course materials. All the responses are not well organized, unclear or with insufficient elaboration.

11. Course Content and Tentative Teaching Schedule

Topic/ Session	Date	Time	Content	Readings	Assignments	Other information
1			Course introduction and overview	Syllabus & Course Requirement		
2			Syllabus & Course Requirement			
3			Data sourcing & collection			Structured data vs. unstructured data Internal data vs. external data

11. Course Content and Tentative Teaching Schedule						
4			Data exploration with descriptive statistics			Univariate analysis Bivariate analysis
5			Data exploration with visualization I			Introduction to data visualization Intro to Tableau Working with Tableau interface
6			Data exploration with visualization II			Aggregation functions Table calculations Filters
7			Data exploration with visualization III			Sorting Details Worksheet options Geographical maps Time series analysis Clustering
8			Data analysis for continuous demand data			Linear Regression
9			Data analysis for individual choice data I			Logistic Regression
10			Data analysis for individual choice data II			Logistic Regression
11			Artificial intelligence in marketing			Invited Talk
12			Course review and final project consultation			
13			Final project presentation			

12. Required/Recommended Readings & Online Materials	
Textbook	There is no required textbook. Data visualization software: Tableau Data analysis software: Microsoft Excel

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

HKU Regulations on Academic Dishonesty:
We are serious in students' ethical conducts. The University Regulations on academic dishonesty will be strictly enforced.
• We do not tolerate students engaging in academic dishonesty which includes, but is not necessarily limited to, plagiarism, paraphrasing of someone else's ideas, unauthorized collaboration on out-of-class projects, cheating on in-class exams, and unauthorized advance access to an exam
• Students are expected to be aware of what plagiarism is and how to avoid it. Please refer to the HKU policies on plagiarism.
• Students should also be familiar with the HKU regulations and policies particularly on attendance, absence, examination, and copyright. Please refer to the HKU Undergraduate Student Handbook and HKU Examination Unit webpage.

Special Accommodations: If you have any condition, such as a physical or learning disability, which will require academic accommodations, please notify me within the first week of the class and I will strive to accommodate your needs.

Deadlines: All deadlines in the course are to be strictly adhered to. If you must turn work in late, I will deduct 10% for late submission penalty.

Technology: As a courtesy to both the instructor and your fellow students, all pagers, cell phones, electronic games, radios, CD/MP3 players, or other devices that generate sound must be turned OFF during class. Set phones to vibrate mode if you must use the phone in the extreme conditions (that are notified to me before class). During exam periods, cell phones MUST BE TURNED OFF and stored in your bag, purse, etc. It is also our department policy that laptops are NOT allowed in the classroom.

15. Additional Course Information

Moodle Course Web Site:
• Students are expected to access the Moodle course frequently for learning supports and new announcements.

Turnitin Check:
• Students should avoid plagiarism and have proper citations