MARK 4290I

Marketing Analytics

Syllabus

Instructor
Song LIN
Room LSK4005
Tel: 2358-7717
mksonglin@ust.hk

Teaching Assistant
Ryan HUI
Room LSK4025
Tel: 2358-7893
mkryan@ust.hk

When and Where

Section	Time	Location
L1	Wed, Fri 1:30 - 2:50 PM	1001
L2	Mon, Wed 12:00 - 1:20 AM	1001
L3	Wed, Fri 3:00 - 4:20 PM	1001

Table of Contents

Overview

The course introduces the foundation and core applications of marketing analytics. There are two major modules for this course:

- In Module 1, we will first draw upon economics and marketing theories to understand why and where we need marketing analytics. We then introduce the basic tools in data science that are widely applied in marketing. At the end of this module, students are expected to understand the basic foundational knowledge, which will be tested in Quiz 1.
- Building on the foundation, in Module 2, we will explore in detail the major applications of data analytics in marketing, including customer, product, pricing, advertising and retail analytics. Individual assignments will help students better understand the important concepts and methodologies. Quiz 2 will assess students' understanding of these applications.

This course is not designed to introduce sophisticated data science techniques behind many marketing analytics applications. Instead, we will focus on the business logics and methodological principles behind the common applications. As such, basic knowledge of calculus, statistics, micro-economics, and marketing management is assumed. The main objective is to equip students with the foundational knowledge of marketing analytics necessary for learning and applying more advanced applications in future career.

Enrollment

Prerequisites

- Marketing Management (MARK 2120)
- Marketing Research (MARK3220) or Business Statistics (ISOM 2500).

Registration

The add/drop period is September 1-14. There are three sections of the same course in different time. You should choose the one that best fits your schedule and attend the section throughout the course. No change in section will be allowed after September 14.

For general enquiries about enrollment, please contact Executive Officer, Miss Roxanne LAU. (mkrox@ust.hk).

Course materials

No required textbook is required. However, we will distribute supplemental readings as needed to facilitate learning. Students will benefit greatly if they read the materials before the lectures. All lecture slides will be posted on the course website.

Tutorials

The official tutorial time is Tuesday 18:00-18:50. However, no face-to-face tutorial is planned for this course. You can use the time for course preparation and review, or to work on the assignments.

Grading

0. Breakdown

Component	Quantity	Points
1. Quizzes	2	50
2. Individual Assignments	4	40
3. Class Participation		8
4. Research Credit		2
Total		100

1. Quiz

There will be two closed-book quizzes designed to assess how well students understand the course materials as the course progresses. The first quiz covers Module 1 on marketing foundations. The second quiz covers Module 2 on core applications. All quiz questions will be based on class lectures and related readings. Hence, attending the lectures is crucial.

Out of fairness towards all students, there will be no make-up exam. Please make sure there is no time clash with both quiz schedules.

2. Individual Assignments

There will be individual assignments related to different applications of marketing analytics. These assignments help you understand and apply the concepts and techniques learned in class. For each assignment, you will have one to two weeks to work on it. You are expected to complete the assignments on your own and submit the assignments on time on Canvas (please do not email the soft copy or hand in the hard copy). Late submission will be penalized.

3. Class Participation

While we do not keep track of attendance, you are encouraged to attend every lecture if possible. Class participation is essential for learning. You will be rewarded if you bring valuable contribution to the lectures. Examples include raising interesting/relevant questions, answering questions asked by the instructor, and giving comments that add additional insights. Here, not only the quantity, but also the *quality*, of the questions/answers/comments matters. To ensure your participation is counted, please (a) attend each lecture and be on time; (b) bring your name tag during each lecture. A few things to keep in mind about the participation:

- A good question/comment is one that is relevant to the discussion and increases everyone's understanding of the issues involved. So lengthy discourses on extraneous material and repetition will not be rewarded.
- The best contributions reflect good listening. They take into consideration ideas offered earlier on in the class rather than being isolated and disjointed.

4. Research Credit

In accordance with HKUST's research mission, students in all marketing courses are expected to complete a research requirement during the semester. This can be done by either participating in two research experiments (1 hour each) or completing two research assignments. Details will be posted on the course website.

Academic Integrity

Academic integrity is a critical value of the university community. Integrity violations destroy the fabric of a learning community and the spirit of inquiry that is vital to the effectiveness the University. **We have absolutely no tolerance for cheating or plagiarism and there are no acceptable excuses.** You are expected to work independently on all exams and assignments.

HKUST places a strong emphasis on academic integrity. To help students and staff to understand the policy, a website has been established that explains the regulations, provides assistance for students in avoiding plagiarism, and sets out the role of faculty and staff when a case of cheating or plagiarism comes to their attention. Please visit the website at http://www.ust.hk/vpaao/integrity.

Enquiry

If you need any help, please contact Ryan, your teaching assistant. Note that Ryan assumes responsibility for many other students. Hence, please respect his time. This means checking the syllabus or with your classmates first if you are uncertain about general class issues.

If there are things for which you think only I can help you, please come see me after class or send me an email. When sending an email, please include "[MARK4290I L#]" in the subject line, where "#" is your section number.

Course Schedule

Date*	Topic	Readings and Assignments
Module 1: Foundations		
9/1 W	Course Introduction	
9/3 F (9/6 M)	Marketing Management I	
9/8 W	Marketing Management II	
9/10 F (9/13 M)	Marketing Management III	
9/15 W	Data Analytics I	"Multiple Regression and Marketing-Mix Models"
9/17 F (9/20 M)	Data Analytics II	"Logistic Regression"
9/22 W	No class (Public Holiday)	
9/24 F (9/27 M)	Data Analytics III	
9/29 W	Data Analytics IV	
10/1 F (10/4 M)	No class (Public Holiday and Quiz Preparation)	
10/5 Tu	**Quiz 1** (19:30-20:30)	
Module 2: Core Applications		
10/6 W	Customer Analytics I	"Cluster Analysis for Segmentation"
10/8 F (10/11 M)	Customer Analytics II	"Customer Profitability and Lifetime Value"
10/13 W	Customer Analytics III	"Customer Lifetime Social Value (CLSV)" "Text Analytics: Turning Words into Data"
10/15 F (10/18 M)	Product Analytics I	"Ride-Hailing Services: Forecasting Uber's Growth"
10/20 W	Product Analytics II	"Conjoint Analysis: Online Tutorial" **Assignment 1 due**
10/22 F (10/25 M)	Product Analytics III	"Collaborative Filtering Gives Customers What They Want"
10/27 W	Pricing Analytics I	
10/29 F (11/1 M)	Pricing Analytics II	"Design of Price and Advertising Elasticity Models"
11/3 W	Advertising Analytics I	"Advertising Experiments at RestaurantGrades" **Assignment 2 due**
11/5 F (11/8 M)	Advertising Analytics II	

11/10 W	Advertising Analytics III	"Paid Search Advertising"
11/12 F (11/15 M)	Advertising Analytics IV	
11/17 W	Retail Analytics I	**Assignment 3 due**
11/19 F (11/22 M)	Retail Analytics II	
11/24 W	Synthesis	
11/26 F (11/29 M)	Consultation	**Assignment 4 due**
Final exam period	**Quiz 2** (To be scheduled)	

* The dates in brackets are for L2.