

Module Outline

Module Code	BMS5504
Module Title	Marketing Analysis and Decision Making
Semester	Semester II, AY22/23
Faculty	Ta-Cheng Huang
Department	Global Asia Institute
Email	tchuang@nus.edu.sg
URL	https://tchuang5.github.io

Module Description The clever use of consumer data helps firms attain and maintain a competitive advantage. This course will introduce you to essential marketing analytic tools widely used in modern enterprises and show you how to apply the tools to extract relevant information from consumer data to enhance strategic thinking and effective marketing decision-making. Throughout the course, you will learn the strategic importance of different marketing concepts to firms, identify the models and methods available for real-life marketing problems, and conduct statistical analysis to make informed marketing decisions.

Module Objectives The course combines lectures, discussions, and hands-on exercises to ensure that it meets the following objectives:

- To familiarize you with marketing analytic tools widely used in modern enterprises.
- To help you understand the strength and limitations of different analysis methods.
- To provide you with hands-on experience applying various analysis methods to solve real-life marketing problems.
- To equip you with analytic skills to select the most suitable method for the data at hand and to make informed marketing decisions.

Textbooks No required textbook for this course. Suggested readings include:

- Angrist, J. D., & Pischke, J. S. (2008). *Mostly Harmless Econometrics. An Empiricist's Companion*. Princeton University Press.
- Chapman C. & Feit E. M. (2019). *R for Marketing Research and Analytics*, 2nd edition. Springer.
- Cunningham, S. (2021). *Causal inference. The Mixtape*. Yale University Press.
- James, G., Witten, D., Hastie, T., & Tibshirani, R. (2021). *An introduction to statistical learning*, 2nd edition. Springer.
- Winston W. L. (2014). *Marketing Analytics: Data-Driven Techniques with Microsoft Excel*. Wiley.

Schedule and Course Outline

Table 1: Course Outline

Week	Date	Topics
1	12/01	Introduction
2	19/01	Descriptive Analytics, Data Visualization, and Cluster Analysis
3	26/01	Linear Regression
4	02/02	Segmentation: Classification and Support Vector Machines
5	09/02	Conjoint Analysis
6	16/02	Ridge Regression, LASSO, and Post-LASSO
<i>Reading Week</i>		
7	02/03	Midterm Exam
8	09/03	Regression Discontinuity
9	16/03	Difference-in-Differences
10	23/03	Synthetic Control
11	30/03	Designing Experiments
12	06/04	Text Analysis
13	13/04	Group Project Presentation
<i>Reading Week</i>		
	27/04	Final Exam

Grades Your grade will be based on your performance over the semester.

Table 2: Grading Scheme

Grade Component	Percentage
Class Participation	10%
Homework Assignments	20%
Midterm Exam	20%
Final Exam	25%
Group Project	25%

10% of the course grade will be based on your contribution to the class, including asking questions and actively participating in class discussions and activities.

Four (4) homework assignments will make up 20% of the course grade. The homework assignments are designed to help you learn the material and prepare for the exams.

The midterm and final exams will count for 20% and 25% of the course grades. The exams will be open-book and include multiple-choice, short-answer, and long-answer questions.

The group project will count for 25% of the course grade. Groups of four to five students will

work together to pick a company/industry of interest and apply models learned from this course to conduct market analyses and develop marketing strategies for the company. On the second-last day of class, you will submit a hard copy of the project write-up and present your findings to the class.

Academic Honesty & Plagiarism Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is “the practice of taking someone else’s work or ideas and passing them off as one’s own” (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule - You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubt, you should consult your instructor.

Additional guidance is available at:

- <http://www.nus.edu.sg/registrar/administrative-policies-proceduresacceptance-record#NUSCodeofStudentConduct>
- <http://nus.edu.sg/osa/resources/code-of-student-conduct>

Last updated on April 2022