

## MODULE OUTLINE

**Module Code** : MKT4415G/MKT4761B  
**Module Title** : Customer Analytics  
**Semester** : Semester II, AY20/21  
**Faculty** : Dr Priyanka Shrivastava  
**Department** : Marketing  
**Email** : [bizpriya@nus.edu.sg](mailto:bizpriya@nus.edu.sg)  
**URL** : <https://bizfaculty.nus.edu.sg/faculty-details/?profId=631>  
**Office Hours** : By Appointment

### Course Description

This course will provide students with a framework for creating data driven marketing strategies, tools and techniques to create, understand and then leverage customer data for making better marketing decisions (with respect to segmentation, targeting, positioning, forecasting and the 4Ps). Customer analytics is a process by which data from customer behavior is used to help make key business decisions via market segmentation and predictive analytics. Customer data based on browsing history and buying patterns is widely available. This staggering amount of data can be used to describe past buying behavior, predict future ones and prescribe new ways to influence future buying decisions made by customers. This course provides an overview of the field of analytics so that you can make informed business decisions.

### Learning Outcome

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

1. Understand the importance of linking marketing activities to customer metrics.
2. Analyze customer information to create and calculate appropriate metrics and quantify its impact on the business' performance.
3. Successfully apply tools and analysis techniques to understand past behavior and predict future actions
4. Communicate key ideas about customer analysis techniques and drive key business outcomes

### Assessment

Class Participation	20%
Assignments (4 Graded Assignments)	20%
Final Project Presentation	30%
Test	30%
Total	100%

### **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-procedures/acceptance-record#NUSCodeofStudentConduct>
- <http://nus.edu.sg/osa/resources/code-of-student-conduct>

### Tentative Course Outline and Schedule of Lectures and Assignments

Week	Topic	In-class discussions and exercises	Assignment & Due date
1	Overview of Marketing Analytics	<ul style="list-style-type: none"> <li>Foundational Marketing Analytics Tools</li> <li>Dividing students in clusters</li> <li>Build a relational database</li> </ul>	
2	Marketing Analytics Metrics	<ul style="list-style-type: none"> <li>Use Marketing Analytics metrics to inform a campaign strategy</li> <li>Real-world Marketing campaigns using marketing analytics metrics</li> <li>Introduction to Customer Lifetime value analysis</li> </ul>	
3	Analytics of Segmentation, Targeting and Positioning	<ul style="list-style-type: none"> <li>Discuss principles of STP</li> <li>Exercise on Cluster Analysis</li> <li>Exercise on Six Steps of the analytics of STP</li> </ul>	Assignment 1: Working exercise on the six steps of the analysis of STP
4	A/B Testing	<ul style="list-style-type: none"> <li>Discuss cases of A/B testing</li> <li>Simulate an A/B test</li> <li>Design an A/B test</li> </ul>	
5	Experimental Design in the Digital Age	<ul style="list-style-type: none"> <li>Discuss cases of field experimentation</li> <li>Simulate an experiment</li> <li>Design an experiment</li> </ul>	<b>** Assignment 1 submission due</b> Assignment 2: Design an A/B test using a Survey Tool
6	Marketing mix models	<ul style="list-style-type: none"> <li>Red Bull case exercise</li> </ul>	
<b>Recess Week</b>			
7	Moderation in Marketing Mix Models	<ul style="list-style-type: none"> <li>Moderation - Red Bull</li> </ul>	<b>** Assignment 2 submission due</b> Assignment 3: Marketing Mix Model- Chipotle
8	Data Visualization	<ul style="list-style-type: none"> <li>Step-by-step with Tableau</li> <li>Create Visuals</li> <li>Word Cloud creation - Tagxedo</li> <li>Infographic creation - Piktochart</li> </ul>	<b>** Assignment 3 submission due</b> Assignment 4: Tableau data Visualization exercise
9	Buyer Persona Case Study	<ul style="list-style-type: none"> <li>Demographics Dashboard Overview</li> <li>Visualizing Demographics</li> <li>Building KPI indicators</li> <li>Sales Analysis Visualizations</li> </ul>	
10	Email Marketing Analysis	<ul style="list-style-type: none"> <li>Email Marketing Dashboard</li> <li>Treemap</li> <li>Click Through Rate Bar chart</li> <li>Time and Day Heatmap</li> </ul>	<b>** Assignment 4 submission due</b>

Week	Topic	In-class discussions and exercises	Assignment & Due date
11	Marketing Impact Analysis	<ul style="list-style-type: none"> <li>• Introduction to Promotion Impact Dashboard</li> <li>• Promotional Calendar</li> <li>• Building Promotional Dashboard</li> </ul>	
12	Artificial Intelligence	<ul style="list-style-type: none"> <li>• Conway's Game of Life</li> <li>• Teachable Machine</li> <li>• Deep learning Akinator activity</li> </ul>	
13	<b>Final Project Presentations</b>		

**Disclaimer for students:** The above schedule may change due to factors beyond my control, by mutual agreement, and/ or to ensure better student learning