

## Annexe A: New/Revised Course Content in OBTL+ Format

### Course Overview

The sections shown on this interface are based on the templates [UG OBTL+](#) or [PG OBTL+](#)

If you are revising/duplicating an existing course and do not see the pre-filled contents you expect in the subsequent sections e.g. Course Aims, Intended Learning Outcomes etc. please refer to [Data Transformation Status](#) for more information.

Expected Implementation in Academic Year	AY2024-2025
Semester/Trimester/Others (specify approx. Start/End date)	Semester 1
Course Author * Faculty proposing/revising the course	Sadat Reza
Course Author Email	sreza@ntu.edu.sg
Course Title	Marketing Analytics
Course Code	BM2515
Academic Units	3
Contact Hours	39
Research Experience Components	Not Applicable

## Course Requisites (if applicable)

Pre-requisites	AB1202 or equivalent
Co-requisites	
Pre-requisite to	
Mutually exclusive to	
Replacement course to	
Remarks (if any)	

## Course Aims

This course aims to introduce you to several basic analytics tools that are applied for marketing decisions. After completion of the course you should be equipped with the conceptual and technical knowledge on how and when to apply these tools in solving marketing decision problems. The course is suitable for second year students enrolled in any business program. The course is also suitable for non-business students interested in marketing analytics. Exposure to introductory statistics or equivalent is necessary. The course will equip the students with the foundational to intermediate level skills on marketing analytics, and will facilitate immersion into a career in marketing analytics, marketing research and brand management, should they choose to do so.

## Course's Intended Learning Outcomes (ILOs)

Upon the successful completion of this course, you (student) would be able to:

ILO 1	Assess the suitability of various data analytic tools in making marketing decisions.
ILO 2	Effectively apply data analytic tools such as cluster analysis for segmentation, regression analysis for marketing mix analysis, conjoint analysis for product attribute pricing and customer lifetime value for determining customer acquisition cost.
ILO 3	Work in a team to solve marketing problems using data analytic tools.

## Course Content

The course will cover the following topics: cluster analysis; linear regression model; logistic regression; conjoint analysis; customer lifetime value. The aim of the course is to provide you the knowledge of how and when to apply these tools for marketing decisions. Emphasis will be on the interpretation of results and how the results can be used for marketing decisions, and not much on the statistical techniques behind these tools.

## Reading and References (if applicable)

Required: Instructor's lecture notes. Students are not required to purchase any textbook. It is mandatory for the students to bring their laptops to class. All exercises will be done in Excel/R. The students are required to ensure that they have installed R and RStudio on their laptops. Optional reading: 1. Analytics at Work: Smarter Decisions, Better Results, by Thomas Davenport and Jeanne Harris.

## Planned Schedule

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
1	Introduction to marketing analytics; course overview; use of descriptive analytics for strategic marketing decisions	1	Seminar slides	In-person	Seminar slides / class exercise
2	Descriptive analytics using Excel	1,2	Seminar slides	In-person	Seminar slides/class exercise
3	Regression models: use in analyzing effects of marketing mix changes	1,2	Seminar slides	In-person	Seminar slides/ class exercise
4	Regression models: use in analyzing effects of marketing mix changes	1,2	Seminar slides	In-person	Seminar slides/ class exercise
5	Conjoint analysis: valuation of product attributes	1,2	Seminar slides	In-person	Seminar slides / class exercise
6	Conjoint analysis: valuation of product attributes	1,2	Seminar slides	In-person	Seminar slides/ class exercise
7	Quiz 1: descriptive analytics, regression, conjoint analysis	1,2	Seminar slides	In-person	Closed book quiz

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
8	Causal effect: randomized controlled trials/AB tests	1,2	Seminar slides	In-person	Seminar slides / class exercise
9	Segmentation using K-means algorithm	1,2	Seminar slides	In-person	Seminar slides/ class exercise
10	Group project	1,2,3	Seminar slides	In-person	Discussion with each group
11	Logistic regression for targeting	1,2	Seminar slides	In-person	Seminar slides/ class exercise
12	Customer lifetime value (CLV): determining customer acquisition costs	1,2	Seminar slides	In-person	Seminar slides/ class exercise
13	Quiz 2: causal effect, K-means algorithm, logistic regression, CLV	1,2	Seminar slides	In-person	Closed book quiz

## Learning and Teaching Approach

Approach	How does this approach support you in achieving the learning outcomes?
Seminars	Content will be uploaded in the NTU Learn system prior to the seminar and students are expected to read the materials before each seminar. Seminar discussions allow ample opportunities to clarify content, concepts. Discussions will also provide the opportunity to hear students' intuitions, experiences and difficulties pertaining to the content. It also offers the opportunity to assess their ability to think critically and articulate clearly.
Individual quiz	The quiz requires you to generate, analyze and deliver numerous materials in a guided manner. This quiz will allow the instructor to assess acquisition of knowledge by the students.

# Assessment Structure

Assessment Components (includes both continuous and summative assessment)

No.	Component	ILO	Related PLO or Accreditation	Weightage	Team/Individual	Rubrics	Level of Understanding
1	Continuous Assessment (CA): Class Participation(Class participation )	1-3	Class Participation	10	Individual	Holistic	Multistructural
2	Continuous Assessment (CA): Test/Quiz(Quiz)	1,2	Acquisition of knowledge	60	Individual	Analytic	Multistructural
3	Continuous Assessment (CA): Project(Project report)	2,3	Teamwork & Interpersonal skills; Problem solving and decision making	20	Team	Holistic	Multistructural
4	Continuous Assessment (CA): Project(Presentation)	2	Oral communication	10	Individual	Holistic	Multistructural

Description of Assessment Components (if applicable)

## Formative Feedback

The seminar will be interactive and your inputs will be highly encouraged and assessed. Feedback will be provided during the class discussions, and also on all your submissions (quizzes, case study analysis, simulation exercises). For practical assessment, the instructor will grade the submissions, review the grades with the students, discuss common mistakes and weaknesses, and provide appropriate answer keys for quizzes.

# NTU Graduate Attributes/Competency Mapping

This course intends to develop the following graduate attributes and competencies (maximum 5 most relevant)

Attributes/Competency	Level
Collaboration	Intermediate
Communication	Intermediate
Decision Making	Intermediate
Digital Fluency	Intermediate
Critical Thinking	Intermediate

# Course Policy

## Policy (Academic Integrity)

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values. As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the academic integrity website for more information. On the use of technological tools (such as Generative AI tools), different courses / assignments have different intended learning outcomes. Students should refer to the specific assignment instructions on their use and requirements and/or consult your instructors on how you can use these tools to help your learning. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

## Policy (General)

You are expected to complete all assigned pre-class readings and activities, attend all seminar classes punctually and take all scheduled assignments and tests by due dates. You are expected to take responsibility to follow up with course notes, assignments and course related announcements for seminar sessions they have missed. You are expected to participate in all seminar discussions and activities.

## Policy (Absenteeism)

Absence from class without a valid reason will affect your overall course grade. Valid reasons include falling sick supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies. If you miss a lecture, you must inform the course instructor via email prior to the start of the class.

## Policy (Others, if applicable)

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Last Updated By: Damien Joseph (Assoc Prof)