City University of Hong Kong
Course Syllabus

offered by Department of Marketing
with effect from Semester B 2024/25

Part I   Course Overview

Course Title: Marketing Engineering

Course Code: MKT6615

Course Duration: Intensive Teaching Mode / One Semester

Credit Units: 3

Level: P6

Medium of Instruction: English

Medium of Assessment: English

Prerequisites: MKT5610 Marketing Strategy and Planning
(Course Code and Title)   MKT5612 Applied Marketing Research

Precursors:
(Course Code and Title)   Nil

Equivalent Courses:
(Course Code and Title)   Nil

Exclusive Courses:
(Course Code and Title)   Nil

Part II   Course Details

1.   Abstract

This course aims to provide students with an understanding of the role of analytical techniques and computer models in enhancing marketing decisions in modern enterprises. Successful examples of marketing engineering as well as a software toolkit for the decision-making process will be provided. Ethics in marketing decision making will be emphasized. The focus is to foster and enhance students' skills in making IT-intensive marketing decisions.

2.   Course Intended Learning Outcomes (CILOs)
(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Explore advanced analytical techniques and software tools to foster innovation in marketing decision-making processes.		✓		
2.	Apply quantitative methods and models to extract actionable insights from marketing data, addressing real-world challenges.			✓	
3.	Develop and demonstrate proficiency in using software tools to analyze and interpret marketing data, supporting strategic decision-making.			✓	
4.	Design effective solutions to marketing problems that are socially responsible and ethically grounded.				✓
5.	Collaborate effectively in teams to propose creative solutions to marketing challenges and communicate these solutions to stakeholders.				✓
		100%			

> *A1:   Attitude*
> *Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.*
> *A2:   Ability*
> *Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.*
> A3:   *Accomplishments*
> *Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.*

3.   Learning and Teaching Activities (LTAs)
(LTAs designed to facilitate students' achievement of the CILOs.)

LTA	Brief Description	CILO No.					Hours/week (if applicable)
		1	2	3	4	5	
Lectures	Through the lectures, students will explore key analytical techniques and the role of computer models in marketing	✓	✓	✓	✓	✓	

	decision-making.						
Computer Lab Sessions	In computer lab sessions, students will apply software tools and models to real-world marketing data. This hands-on approach will enable them to develop proficiency in extracting insights and making informed marketing decisions.	✓	✓	✓	✓	✓	
Case Study Analysis	By analyzing and discussing case studies, students will apply theoretical knowledge to practical scenarios, enhancing their understanding of complex marketing challenges and decision-making processes.	✓	✓	✓	✓	✓	
Group Project	Students will form groups to identify a real marketing issue, develop a project, and apply analytical tools and models to propose solutions. This project will culminate in a written report and a presentation, demonstrating their ability to innovate and collaborate effectively.	✓	✓	✓	✓	✓	

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.					Weighting	Remarks
	1	2	3	4	5		
Continuous Assessment:70%							
Group Term Project Report Students will work in groups on selected topics, where they can demonstrate how they can apply what they learned in class to solve business marketing problems.	✓	✓	✓	✓	✓	20%	
Group Term Project Oral Presentation Students will prepare and deliver presentations on their group projects.	✓	✓	✓	✓	✓	10%	
In-class Discussion Students need to participate in class discussions and activities and ask questions to facilitate their understanding of knowledge taught in class.	✓	✓	✓	✓	✓	10%	
Individual Homework Out-of-class assignments will be given to students throughout the semester to test their understanding of class material.	✓	✓	✓	✓	✓	30%	
Examination: 30% (duration: 2, if applicable)							
Examination Students will be assessed via the examination for their understanding of concepts learned in class, textbooks, reading materials and their ability to apply subject-related knowledge.	✓	✓	✓	✓	✓	30%	
						100%	

Regulation of the course:

Students need to meet the attendance requirement of the Dept. of Marketing for the completion of the course.

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Applicable to students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Group Term Project Report	1.1 ABILITY to INTEGRATE major concepts of marketing engineering to marketing problems, and IDENTIFY the ways of defining, designing and conducting analytical marketing analysis	High	Significant	Moderate	Basic	Not even reaching marginal levels
	1.2 ABILITY to IDENTIFY the various process and procedures in analytical decision making.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	1.3 COMPETENCE to ANALYZE marketing data using software package.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	1.4 ABILITY to RECOMMEND solutions to a marketing problem based on the analysis of marketing data with EMPHASIS on business ethics.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	1.5 ABILITY to PRESENT and ORGANIZE information in a business report format.	High	Significant	Moderate	Basic	Not even reaching marginal levels
2. Group Term Project Oral Presentation	2.1 ABILITY to present and communicate information in oral and electronic	High	Significant	Moderate	Basic	Not even reaching marginal levels

	format				
	2.2 ABILITY to show coverage of contents and demonstrate time management skills	High	Significant	Moderate	Basic	Not even reaching marginal levels
	2.3 ABILITY to provide quality answers to questions raised in the presentation Q&A session.	High	Significant	Moderate	Basic	Not even reaching marginal levels
3. In-Class Discussion	3.1 ABILITY to show familiarity with key concepts and definitions.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	3.2 ABILITY to state critical points and make contributions of the assigned questions or problem	High	Significant	Moderate	Basic	Not even reaching marginal levels
	3.3 ABILITY to participate and equip with excellent presentation skills	High	Significant	Moderate	Basic	Not even reaching marginal levels
4. Individual Homework	4.1 ABILITY to show excellent analytic skills in solving marketing engineering problems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	4.2 ABILITY to command critical discussing of the marketing engineering models and their applications, and the key roles of business ethics in marketing decisions.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	4.3 ABILITY to select, analyse and evaluate the analytical models used in marketing engineering	High	Significant	Moderate	Basic	Not even reaching marginal levels
	4.4 ABILITY to apply both managerial judgment and	High	Significant	Moderate	Basic	Not even reaching

						marginal levels
	analytical approaches to current marketing problems and issues					
5. Examination	5.1 ABILITY to grasp of all aspects of the course, with the ability to integrate major concepts of marketing engineering to marketing problems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	5.2 ABILITY to identify the various process and procedures in collecting and analyzing marketing data and the relevant methodologies used.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	5.3 ABILITY to apply course content in practical marketing situations and make decisions based on the output of marketing analytics.	High	Significant	Moderate	Basic	Not even reaching marginal levels

Applicable to students admitted from Semester A 2022/23 to Summer Term 2024

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Group Term Project Report	1.1 ABILITY to INTEGRATE major concepts of marketing engineering to marketing problems, and IDENTIFY the ways of defining, designing and conducting analytical marketing analysis	Excellent	Good	Marginal	Not reaching marginal levels
	1.2 ABILITY to IDENTIFY the various process and procedures in analytical decision making.	Excellent	Good	Marginal	Not reaching marginal levels

		Excellent	Good	Marginal	Not reaching marginal levels
	1.3 COMPETENCE to ANALYZE marketing data using software package.	Excellent	Good	Marginal	Not reaching marginal levels
	1.4 ABILITY to RECOMMEND solutions to a marketing problem based on the analysis of marketing data with EMPHASIS on business ethics.	Excellent	Good	Marginal	Not reaching marginal levels
	1.5 ABILITY to PRESENT and ORGANIZE information in a business report format.	Excellent	Good	Marginal	Not reaching marginal levels
2. Group Term Project Oral Presentation	2.1 ABILITY to present and communicate information in oral and electronic format	Excellent	Good	Marginal	Not reaching marginal levels
	2.2 ABILITY to show coverage of contents and demonstrate time management skills	Excellent	Good	Marginal	Not reaching marginal levels
	2.3 ABILITY to provide quality answers to questions raised in the presentation Q&A session.	Excellent	Good	Marginal	Not reaching marginal levels
3. In-Class Discussion	3.1 ABILITY to show familiarity with key concepts and definitions.	Excellent	Good	Marginal	Not reaching marginal levels
	3.2 ABILITY to state critical points and make contributions of the assigned questions or problem	Excellent	Good	Marginal	Not reaching marginal levels
	3.3 ABILITY to participate and equip with excellent presentation skills	Excellent	Good	Marginal	Not reaching marginal levels
4. Individual	4.1 ABILITY to show	Excellent	Good	Marginal	Not reaching

Homework	excellent analytic skills in solving marketing engineering problems.				marginal levels
	4.2 ABILITY to command critical discussing of the marketing engineering models and their applications, and the key roles of business ethics in marketing decisions.	Excellent	Good	Marginal	Not reaching marginal levels
	4.3 ABILITY to select, analyse and evaluate the analytical models used in marketing engineering	Excellent	Good	Marginal	Not reaching marginal levels
	4.4 ABILITY to apply both managerial judgment and analytical approaches to current marketing problems and issues	Excellent	Good	Marginal	Not reaching marginal levels
5. Examination	5.1 ABILITY to grasp of all aspects of the course, with the ability to integrate major concepts of marketing engineering to marketing problems.	Excellent	Good	Marginal	Not reaching marginal levels
	5.2 ABILITY to identify the various process and procedures in collecting and analyzing marketing data and the relevant methodologies used.	Excellent	Moderate	Marginal	Not reaching marginal levels
	5.3 ABILITY to apply course content in practical marketing situations and make decisions based on the output of marketing analytics.	Excellent	Good	Marginal	Not reaching marginal levels

Part III   Other Information (more details can be provided separately in the teaching plan)

1.   **Keyword Syllabus**
     (An indication of the key topics of the course.)

Marketing analysis and planning, computer-assisted marketing, analytical marketing, marketing decision models, market response models, marketing analytics, marketing science, decision modelling.

2.   **Reading List**
2.1   **Compulsory Readings**
     (Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Gary L. Lilien, Arvind Rangaswamy. And Arnaud De Bruyn., "Principles of Marketing Engineering and Analytics", 3rd ed. DecisionPro, 2017. ISBN: 0-9857-6482-1.

2.2   **Additional Readings**
     (Additional references for students to learn to expand their knowledge about the subject.)

1.	Wayne L. Winston, "Marketing Analytics: Data-Driven Techniques with Microsoft Excel", Wiley, 2014.
2.	Paul W. Farris, Neil T. Bendle, Phillip E. Pfeifer, & David J. Reibstein. *Marketing metrics: The definitive guide to measuring marketing performance*. 2010, 2nd Ed. Prentice Hall.
3.	Leeflang, Peter S.H. et al. *Building Models for Marketing Decisions*. 2000. Boston, MA: Kluwer.