

MKT6615: MARKETING ENGINEERING

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Marketing Engineering

Subject Code

MKT - Marketing

Course Number

6615

Academic Unit

Marketing (MKT)

College/School

College of Business (CB)

Course Duration

One Semester

Credit Units

3

Level

P5, P6 - Postgraduate Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

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.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if DEC-A1 DEC-A2 DEC-A3 app.)			
1	Explore advanced analytical techniques and software tools to foster innovation in marketing decision-making processes.		x		
2	Apply quantitative methods and models to extract actionable insights from marketing data, addressing real-world challenges.			x	
3	Develop and demonstrate proficiency in using software tools to analyze and interpret marketing data, supporting strategic decision-making.			x	
4	Design effective solutions to marketing problems that are socially responsible and ethically grounded.				x
5	Collaborate effectively in teams to propose creative solutions to marketing challenges and communicate these solutions to stakeholders.				x

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.

Learning and Teaching Activities (LTAs)

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

2	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.	1, 2, 3, 4, 5	
3	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.	1, 2, 3, 4, 5	
4	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.	1, 2, 3, 4, 5	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("- for nil entry)	Allow Use of GenAI?
1	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.	1, 2, 3, 4, 5	20	-	Yes

2	Group Term Project Oral Presentation Students will prepare and deliver presentations on their group projects.	1, 2, 3, 4, 5	10	-	Yes
3	In-class Discussion Students need to participate in class discussions and activities and ask questions to facilitate their understanding of knowledge taught in class.	1, 2, 3, 4, 5	10	-	No
4	Individual Homework Out-of-class assignments will be given to students throughout the semester to test their understanding of class material.	1, 2, 3, 4, 5	30	-	No

Continuous Assessment (%)

70

Examination (%)

30

Examination Duration (Hours)

2

Additional Information for ATsExamination

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.

Regulation of the course:

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

Assessment Rubrics (AR)**Assessment Task**

Group Term Project Report (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

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

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Group Term Project Report (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

1.2 ABILITY to IDENTIFY the various process and procedures in analytical decision making.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Group Term Project Report (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

1.3 COMPETENCE to ANALYZE marketing data using software package.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Group Term Project Report (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

1.4 ABILITY to RECOMMEND solutions to a marketing problem based on the analysis of marketing data with EMPHASIS on business ethics.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Group Term Project Report (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

1.5 ABILITY to PRESENT and ORGANIZE information in a business report format.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Group Term Project Oral Presentation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

2.1 ABILITY to present and communicate information in oral and electronic format

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Group Term Project Oral Presentation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

2.2 ABILITY to show coverage of contents and demonstrate time management skills

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Group Term Project Oral Presentation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

2.3 ABILITY to provide quality answers to questions raised in the presentation Q&A session.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

In-Class Discussion (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

3.1 ABILITY to show familiarity with key concepts and definitions.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

In-Class Discussion (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

3.2 ABILITY to state critical points and make contributions of the assigned questions or problem

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

In-Class Discussion (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

3.3 ABILITY to participate and equip with excellent presentation skills

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Individual Homework (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

4.1 ABILITY to show excellent analytic skills in solving marketing engineering problems.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Individual Homework (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

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

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Individual Homework (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

4.3 ABILITY to select, analyse and evaluate the analytical models used in marketing engineering

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Individual Homework (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

4.4 ABILITY to apply both managerial judgment and analytical approaches to current marketing problems and issues

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

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

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

5.2 ABILITY to identify the various process and procedures in collecting and analyzing marketing data and the relevant methodologies used.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

5.3 ABILITY to apply course content in practical marketing situations and make decisions based on the output of marketing analytics.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Group Term Project Report (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

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

(A+, A, A-) Excellent

Good

(B+, B) Good

Marginal

(B-, C+, C) Marginal

Failure

(F) Not reaching marginal levels

Assessment Task

Group Term Project Report (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

1.2 ABILITY to IDENTIFY the various process and procedures in analytical decision making.

Excellent

(A+, A, A-) Excellent

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(B+, B) Good

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(B-, C+, C) Marginal

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Assessment Task

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Excellent

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Criterion

1.4 ABILITY to RECOMMEND solutions to a marketing problem based on the analysis of marketing data with EMPHASIS on business ethics.

Excellent

(A+, A, A-) Excellent

Good

(B+, B) Good

Marginal

(B-, C+, C) Marginal

Failure

(F) Not reaching marginal levels

Assessment Task

Group Term Project Report (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

1.5 ABILITY to PRESENT and ORGANIZE information in a business report format.

Excellent

(A+, A, A-) Excellent

Good

(B+, B) Good

Marginal

(B-, C+, C) Marginal

Failure

(F) Not reaching marginal levels

Assessment Task

Group Term Project Oral Presentation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

2.1 ABILITY to present and communicate information in oral and electronic format

Excellent

(A+, A, A-) Excellent

Good

(B+, B) Good

Marginal

(B-, C+, C) Marginal

Failure

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Assessment Task

Group Term Project Oral Presentation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

2.2 ABILITY to show coverage of contents and demonstrate time management skills

Excellent

(A+, A, A-) Excellent

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(B+, B) Good

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(B-, C+, C) Marginal

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Assessment Task

Individual Homework (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

4.1 ABILITY to show excellent analytic skills in solving marketing engineering problems.

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(B-, C+, C) Marginal

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Part III Other Information

Keyword Syllabus

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

Reading List

Compulsory Readings

Title	
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.

Additional Readings

Title	
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.