# MKT3608: MARKETING INTELLIGENCE AND APPLICATIONS OF ANALYTICS

#### **Effective Term**

Semester B 2024/25

# Part I Course Overview

#### **Course Title**

Marketing Intelligence and Applications of Analytics

## **Subject Code**

MKT - Marketing

#### **Course Number**

3608

#### **Academic Unit**

Marketing (MKT)

#### College/School

College of Business (CB)

#### **Course Duration**

One Semester

#### **Credit Units**

3

#### Level

B1, B2, B3, B4 - Bachelor's Degree

## **Medium of Instruction**

English

#### **Medium of Assessment**

English

## Prerequisites

CB2601 Marketing

#### **Precursors**

CB2200 Business Statistics CB2203 Data-driven Business Modeling CB2240 Introduction to Business Programming in Python

#### **Equivalent Courses**

Nil

#### **Exclusive Courses**

Nil

# Part II Course Details

#### **Abstract**

This course equips students with the skills to systematically solve marketing problems through analytics. Students will learn to structure marketing challenges by selecting appropriate quantitative models that align with available data and defined business objectives. The course introduces a diverse range of mathematical and statistical methods for analyzing marketing data using software tools. Additionally, students will develop the ability to translate technical analyses into actionable business decisions and communicate them effectively in a business context. The overarching goal is to enhance students' capabilities in extracting value from data to improve decision-making in marketing.

## **Course Intended Learning Outcomes (CILOs)**

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Analyze marketing problems using appropriate quantitative models and software tools, demonstrating the ability to match analytical techniques with business objectives and available data.			X	
2	Apply advanced statistical and mathematical methods to extract insights from marketing data.			x	
3	Translate complex analytical findings into actionable business recommendations, effectively communicating results in a business context.			X	
4	Evaluate the potential applications of emerging technologies in solving marketing challenges and enhancing decision-making processes.		X		
5	Create a comprehensive marketing analytics project that addresses a real-world business problem, demonstrating proficiency in data analysis, strategic thinking, and collaborative problem-solving.				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	Description: Students will engage in interactive lectures where fundamental theories, quantitative models, and modern practices in marketing analytics are discussed.	1, 2, 3, 4	
2	Hands-on Data Analysis Workshops	In computer lab sessions, students will participate in hands-on workshops using software tools to conduct various data analyses. These sessions will help in applying theoretical knowledge to practical datasets, improving analytical skills and proficiency with marketing analytics tools.	1, 2, 3	
3	Case Study Analysis	Students will analyze case studies throughout the course to identify marketing problems, apply appropriate analytical models, and propose data-driven solutions. This activity will enhance the ability to apply learned concepts in realistic scenarios and develop critical thinking skills.	3, 4, 5	
4	Strategy Development Workshops	Students will develop marketing strategies based on outcomes from data analysis. These activities will focus on translating analytical insights into actionable business recommendations.	2, 3, 4	

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5	Collaborative Project	Students will work	1, 2, 3, 4, 5	
	Work	collaboratively in groups		
		on their marketing		
		analytics project		
		throughout the course.		
		This project will promote		
		teamwork, application of		
		comprehensive marketing		
		analytics skills, and		
		effective communication		
		of complex analytical		
		findings.		

# Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Individual Assignments Students will complete a series of individual assignments involving practical data analysis using various software tools. These assignments will test students' ability to apply marketing analytics tools and models to solve specific problems, analyze data, and make informed decisions based on their analyses.	1, 2, 3	30	
2	Group Project In groups, students will tackle a real- world marketing problem by applying the analytical techniques learned throughout the course. This project will encompass data collection, analysis, and the formulation of marketing strategies. The project will culminate in a detailed report and a presentation, assessing students' ability to collaborate, synthesize analytical findings, and communicate them effectively.	1, 2, 3, 4, 5	30	

3	Class Discussion	1, 3, 4	10	
	Students will be			
	evaluated on their			
	ability to critically			
	engage with the course			
	material, demonstrate			
	understanding, and			
	contribute insights during			
	class discussions. This			
	assessment will focus			
	on students' grasp of			
	marketing analytics' role			
	in decision-making and			
	strategy formulation.			

#### Continuous Assessment (%)

70

#### Examination (%)

30

#### **Examination Duration (Hours)**

2

#### **Additional Information for ATs**

Regulation of the course

- 1. Students need to meet the attendance requirement of the Dept. of Marketing for the completion of the course.
- 2. Students are required to pass BOTH coursework and examination components in order to be awarded a pass.
- 3. Students' final grades are subject to the Assessment Panel or its delegate's final decision.

#### Assessment Rubrics (AR)

#### **Assessment Task**

Individual Assignments

## Criterion

- 1. Integrate quantitative models and analytical techniques to solve marketing problems.
- 2. Apply appropriate software tools to analyze marketing data effectively.
- 3. Interpret analytical results and translate them into actionable business insights.

#### Excellent (A+, A, A-)

- 1. Demonstrates superior integration of models and techniques
- 2. Applies software tools with excellent proficiency
- 3. Provides outstanding interpretation and actionable insights

## Good (B+, B, B-)

- 1. Shows good integration of models and techniques
- 2. Applies software tools competently
- 3. Offers good interpretation and actionable insights

#### Fair (C+, C, C-)

- 1. Demonstrates acceptable integration of models and techniques
- 2. Applies software tools adequately
- 3. Provides acceptable interpretation and insights

#### Marginal (D)

- MKT3608: Marketing Intelligence and Applications of Analytics
- 1. Shows limited integration of models and techniques
- 2. Applies software tools with minimal competence
- 3. Offers marginal interpretation and insights

#### Failure (F)

- 1. Fails to integrate models and techniques
- 2. Fails to apply software tools effectively
- 3. Fails to provide meaningful interpretation or insights

#### **Assessment Task**

Group Project

#### Criterion

- 1. Analyze a real-world marketing problem using appropriate analytical techniques.
- 2. Apply advanced statistical and mathematical methods to extract insights from marketing data.
- 3. Synthesize findings to develop comprehensive marketing strategies.
- 4. Communicate complex analytical results effectively in both written and oral formats.
- 5. Demonstrate collaborative problem-solving and teamwork skills.

#### Excellent (A+, A, A-)

- 1. Conducts excellent analysis of the marketing problem
- 2. Applies advanced methods with outstanding proficiency
- 3. Synthesizes findings into highly effective strategies
- 4. Communicates results with exceptional clarity and impact
- 5. Demonstrates superior collaboration and teamwork

#### Good (B+, B, B-)

- 1. Conducts good analysis of the marketing problem
- 2. Applies advanced methods competently
- 3. Synthesizes findings into effective strategies
- 4. Communicates results clearly and effectively
- 5. Demonstrates good collaboration and teamwork

#### Fair (C+, C, C-)

- 1. Conducts adequate analysis of the marketing problem
- 2. Applies advanced methods acceptably
- 3. Synthesizes findings into reasonable strategies
- 4. Communicates results with acceptable clarity
- 5. Demonstrates acceptable collaboration and teamwork

#### Marginal (D)

- 1. Conducts limited analysis of the marketing problem
- 2. Applies advanced methods with minimal competence
- 3. Synthesizes findings into marginally effective strategies
- 4. Communicates results with limited clarity
- 5. Demonstrates minimal collaboration and teamwork

#### Failure (F)

- 1. Fails to analyze the marketing problem effectively
- 2. Fails to apply advanced methods correctly
- 3. Fails to synthesize findings into coherent strategies
- 4. Fails to communicate results clearly
- 5. Fails to demonstrate effective collaboration and teamwork

#### Assessment Task

Class Discussion

#### Criterion

- 1. Engage critically with course material during class discussions.
- 2. Contribute insightful ideas and questions related to marketing analytics and its business applications.

#### Excellent (A+, A, A-)

- 1. Engages with superior critical thinking and depth
- 2. Contributes highly insightful ideas and questions proactively

#### Good (B+, B, B-)

- 1. Engages with good critical thinking and understanding
- 2. Contributes valuable ideas and questions regularly

#### Fair (C+, C, C-)

- 1. Engages with acceptable critical thinking
- 2. Contributes occasional ideas and questions

#### Marginal (D)

- 1. Engages with limited critical thinking
- 2. Contributes minimal ideas or questions

#### Failure (F)

- 1. Fails to engage critically with course material
- 2. Fails to contribute meaningful ideas or questions

#### Assessment Task

Examination

# Criterion

- 1. Demonstrate comprehensive understanding of marketing analytics concepts and theories.
- 2. Apply quantitative models and analytical techniques to solve complex marketing problems.
- 3. Evaluate the potential of emerging technologies in marketing analytics.
- 4. Formulate data-driven marketing strategies based on analytical insights.

#### Excellent (A+, A, A-)

- 1. Demonstrates superior comprehensive understanding
- 2. Applies models and techniques with excellent proficiency
- 3. Evaluates emerging technologies with outstanding insight
- 4. Formulates highly effective data-driven strategies

#### Good (B+, B, B-)

- 1. Demonstrates good comprehensive understanding
- 2. Applies models and techniques competently
- 3. Evaluates emerging technologies with good insight
- 4. Formulates effective data-driven strategies

#### Fair (C+, C, C-)

- 1. Demonstrates acceptable understanding
- 2. Applies models and techniques adequately
- 3. Evaluates emerging technologies with some insight
- 4. Formulates reasonable data-driven strategies

#### Marginal (D)

- 1. Demonstrates limited understanding
- 2. Applies models and techniques with minimal competence
- 3. Evaluates emerging technologies with limited insight
- 4. Formulates marginally effective strategies

#### Failure (F)

- 1. Fails to demonstrate understanding of key concepts
- 2. Fails to apply models and techniques correctly
- 3. Fails to evaluate emerging technologies meaningfully
- 4. Fails to formulate coherent data-driven strategies

# **Part III Other Information**

## **Keyword Syllabus**

Marketing Intelligence, Marketing Analytics, Customer Analytics, Quantitative Modeling, Data Analysis, Statistical Methods, Predictive Analytics, Customer Segmentation, Targeting Strategies, Positioning Analysis, Regression Analysis, Forecasting Models, Data-Driven Decision Making, Marketing Strategy Development, Business Intelligence Tools, Customer Behavior Analysis, Marketing Performance Metrics

#### **Reading List**

#### **Additional Readings**

	Title
1	Lilien, G. L., Rangaswamy, A., & De Bruyn, A. (2017). Principles of marketing engineering and analytics.
2	Venkatesan, R., Farris, P. W., & Wilcox, R. T. (2021). Marketing Analytics: Essential Tools for Data-driven Decisions.
3	Knaflic, C. N. (2015). Storytelling with data: A data visualization guide for business professionals.
4	Jeffery, M. (2010). Data-driven marketing: the 15 metrics everyone in marketing should know.
5	Grigsby, M. (2018). Marketing Analytics: A Practical Guide to Improving Consumer Insights Using Data Techniques.
6	Albright, S. C., & Winston, W. L. (2016). Business Analytics: Data Analysis & Decision Making.
7	Winston, W. L. (2021). Analytics Stories: Using Data to Make Good Things Happen.
8	Winston, W. L. (2014). Marketing analytics: Data-driven techniques with Microsoft Excel.
9	Hwang, Y. H. (2019). Hands-On Data Science for Marketing: Improve your marketing strategies with machine learning using Python and R.
10	Schwarz, J. S., Chapman, C., & Feit, E. M. (2020). Python for marketing research and analytics.
11	Baig, M. R., Govindan G., & Shrimali V. R. (2021). Data Science for Marketing Analytics: A practical guide to forming a killer marketing strategy through data analysis with Python.