

CB2200: BUSINESS STATISTICS

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Business Statistics

Subject Code

CB - College of Business (CB)

Course Number

2200

Academic Unit

Decision Analytics and Operations (DAOS)

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

Nil

Precursors

Nil

Equivalent Courses

GE2262 Business Statistics

Exclusive Courses

GE2213 Understanding Uncertainty and Statistical Reasoning

Part II Course Details

Abstract

This course aims to facilitate students' learning of basic statistical concepts commonly used in business management decision making, and their application to the real world. The course content is based on real-world examples and cases to encourage students to develop their attitude and ability to discover and innovate.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if DEC-A1 app.)		DEC-A2	DEC-A3
1	Explain concepts in numerical descriptive measures, sampling distributions, confidence interval estimation, hypothesis testing, and simple linear regression model.	35		x	
2	Select appropriate statistical methods to analyse real-life business data.	35		x	
3	Interpret the statistical results and give recommendations for business decisions.	10	x	x	
4	Apply standard statistical software, such as Microsoft Excel, to analyse data arising from real-life business problems.	20		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	<p>Lectures</p> <p>Students will engage in formal lecture to gain knowledge about statistical analytical techniques.</p> <p>Students will follow instructor's demonstration and use computer software to generate statistical outputs.</p>	1, 2, 3, 4	

2	Tutorials	Students will engage in discussion with peers to evaluate the criteria and appropriateness of chosen statistical measures and methods to real-world business problems.	1, 2, 3	
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Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("- " for nil entry)	Allow Use of GenAI?
1	Quizzes	1, 2, 3	20	-	Yes
2	Assignments	2, 3, 4	30	-	No

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Minimum Examination Passing Requirement (%)

20

Additional Information for ATs

Apart from achieving an overall passing mark for the course, students are required to obtain a minimum mark of 20% in the final examination in order to pass the course.

Assessment Rubrics (AR)**Assessment Task**

Quizzes

Criterion

1.1 ABILITY to DEFINE the statistical terminologies.

1.2 ABILITY to SELECT and APPLY different statistical methods to solve business 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

Assignments

Criterion

2.1 ABILITY to IDENTIFY a set of relevant statistical concepts to real-world problems.

2.2 ABILITY to APPLY the relevant statistical concepts to ANALYSE the cases.

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

Written Examination

Criterion

4.1 ABILITY to SELECT and APPLY different statistical methods to solve business problems.

4.2 ABILITY to INTERPRET the given computer outputs and provide RECOMMENDATIONS accordingly.

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

Part III Other Information

Keyword Syllabus

Presenting Data and Descriptive Statistics

Types of data. Organizing and visualizing data. Descriptive statistics including measures of central tendency, variation and shape.

Basic Probability and Probability Distributions

Probability distribution for a discrete random variable. Binomial distribution. Normal distribution. Sampling distributions of mean and proportion. Central limit theorem.

Statistical Inference

Estimation of population parameters - the mean and proportion. Confidence interval estimation. Statistical hypotheses. Type I and Type II errors. The significance level and rejection region. The p-value. Testing hypotheses about the mean and proportion. Determining sample size.

Simple Linear Regression

Scatterplots. Measuring correlation. Simple linear regression model. Least squares estimated of parameters. Measures of variation. Inference about regression parameters. Prediction of new observations.

Reading List**Compulsory Readings**

Title	
1	Levine, D.M., Szabat, K.A. and Stephan, D.F. Business Statistics: A First Course. Pearson.

Additional Readings

Title	
1	Bennett, J.O., Briggs, W.L. and Triola, M.F. Statistical Reasoning for Everyday Life. Pearson.
2	Liu, K.I. and To, K.M. Speaking of Statistics. Pearson.
3	Newbold, P., Carlson, W.L. and Thorne, B. Statistics for Business and Economics. Pearson.
4	Gould, R. and Ryan, C.N. Introductory Statistics: Exploring the World through Data. Pearson.
5	Sincich, T. Business Statistics by Example. Prentice Hall.
6	Middleton, M.R. Data Analysis Using Microsoft Excel. Duxbury Press.
7	Online Resources : Statistics Glossary https://www.statistics.com/glossaries/
8	Statistical Universe http://www-personal.umich.edu/~graceyor/govdocs/statuniv.html
9	STICI – A very interesting online statistics course http://www.stat.berkeley.edu/~stark/SticiGui/Text/index.htm
10	HyperStat Online Statistics Textbook http://davidmlane.com/hyperstat/