GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Bachelor of Business Administration

Level: UG

Course / Subject Code: BB01001031

Course / Subject Name: Business Statistics and Logic

w. e. f. Academic Year:	2024 – 25
Semester:	1
Category of the Course:	Core Course (CC)

Prerequisite:	UG Course
Rationale:	The goal of this course is to familiarize BBA students with the fundamentals of business statistics and logic. It helps students improve their crucial analytical and decision-making skills. This subject enables students to interpret data effectively and make informed business decisions.

Course Outcome:

After Completion of the Course, Student will be able to:

No	Course Outcomes	RBT Level
01	Remember the fundamental concepts and formulas of various statistical methods	Remember
02	Understand basics of Logic and graphical as well as tabular presentation of quantitative data and measurement of central tendency	Understanding
03	Apply different methods of correlation and regression in various businesses situations for decision making	Apply
04	Analyze various circumstances of business and economy through Index number	Analyze

Revised Bloom's Taxonomy (RBT)

Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
				Theory		Tutorial / Practical		
L	**T**	**PR**	**C**	ESE (E)	PA / CA (M)	PA/CA (I)	ESE (V)	
3	1	0	4	70	30	50	0	150

Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	**Unit 1: Introduction to Business Statistics** Introduction to Statistics - Overview – Definition, Functions, Scopes & Limitations. Types of Data - Primary and Secondary Data, Organization of Data - Frequency Tables and Frequency Distribution, Presentation of Data - Bar Graph, Pie-Chart, Line Graph, Histograms & Frequency Polygons.	10	25%
2.	**Unit 2: Measurement of Central Tendency & Dispersion** Measurement of Central Tendency- Arithmetic Mean, Median, Mode, Percentile and Quartile (for Ungrouped and Grouped Data. Measures of Dispersion – Concept of Dispersion, Absolute and Relative measure of Dispersion, Range, Variance, Standard Deviation, Coefficient of Variation and Basic Concept of Skewness & Kurtosis.	12	30%
3.	**Unit 3: Linear Correlation, Regression & Index Numbers** Correlation - Meaning, Definition, Scatter Plot Diagram of Correlation, Karl Pearson's Coefficient of Correlation, Spearman's Rank Correlation Coefficient. Simple Linear Regression - Lines of Regression, Concepts and uses of index numbers - Construction of Index Numbers: Laspeyres, Paasche, and Fisher's Ideal Index, Cost of Living Index number.	15	30%
4.	**Unit 4: Fundamentals of Logic** Basic Logical Concepts: Propositions, Arguments, Validity, Soundness. Methods of Reasoning: Deductive and Inductive Reasoning. Permutation & Combination: Methods and their Business Applications	8	15%
5.	**Practical:** The practice assignments of Tabulation, Graphical presentation of Data, Measurement of Central Tendency, Correlation, Regression, Index Number, etc should be given to students. A project report to understand the application of statistics in real life situations which helps to implement the classroom learning to find solutions for current issues in the society/businesses/economy.	15	NIL
	Total	**60**	**100**

Suggested Specification Table with Marks (Theory):

Distribution of Theory Marks (in %)					
R Level	**U Level**	**A Level**	**N Level**	**E Level**	**C Level**
15	35	30	20	0	0

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

Suggested Learning Resources:

Sr. No.	Title of Book	Author	Publication with place, year and ISBN
1	Business Statistics	J. K. Sharma	Vikas Publication House Pvt. Ltd. (Latest Edition)
2	Fundamental of Statistics	Gupta	S. Chand & Sons (Latest Edition)
3	Statistics (Theory, Methods & Applications)	Sancheti & Kapoor	S. Chand & Sons (Latest Edition)
4	Statistics for Managers	Levine, Stephan & Szabat	Pearson Publication House (Latest Edition)

Note: wherever the standard books are not available for the topic appropriate print and online resources, journals and books published by different authors may be prescribed.

Suggested Project/Practical Activity for PA: (50 Marks)

The practice assignments of Tabulation, Graphical presentation of Data, Measurement of Central Tendency, Correlation, Regression, Index Number, etc should be given to students. A project report to understand the application of statistics in real life situations which helps to implement the classroom learning to find solutions for current issues in the society/businesses/economy.

Course Outcomes (COs) and Program Outcomes (POs) Mapping

COs	Course Outcomes	PO1	PO2	PO3	PO4	PO5
CO1	Remember the fundamental concepts and formulas of various statistical methods	3	3	-	-	3
CO2	Understand basics of Logic and graphical as well as tabular presentation of quantitative data and measurement of central tendency	3	3	-	-	3

CO3	Apply different methods of correlation and regression in various businesses situations for decision making	-	3	3	-	3
CO4	Analyze various circumstances of business and economy through Index number	-	3	2	-	3

*Legend: '**3**' for high, '**2**' for medium, '**1**' for low and '**-**' for no correlation of each CO with PO.*

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