Semester-2

S. No.	Course Code	Course Name	Course Type	Cd	L	T	P	Marks		
								Sessional	Final Exam	Total
1.	BBAMJ-201	Business Mathematics & Statistics	Major	4	4	0	0	40	60	100

COURSE OUTCOMES:

At the end of the course the student will be able to:	
CO1	Examine the concept of business math and statistics.
CO2	Apply Mean, Median and Mode as the measures of central tendency.
CO3	Articulate the measures of dispersion and its applicability in research.
CO4	Explore correlation and regression and their applicability in decision-making.
CO5	Compute time series and Index numbers.

Detailed Syllabus
Section A
Business Mathematics

Unit I: Matrices: Definition of a matrix. Types of matrices; Algebra of matrices. Calculation of values of determinants up to third order; Ad joint of a matrix; Finding inverse of a matrix through ad joint; Applications of matrices to solution of simple business and economic problems.

(10 Hrs)

Unit II: Basic Mathematics of Finance: Simple and compound interest Rates of interest – nominal, effective and continuous – their interrelationships; Compounding and discounting of a sum using different types of rates.

(09 Hrs)

Section B
Statistics

Unit III: Uni Variate Analysis: Measures of Central Tendency including arithmetic mean, geometric mean and harmonic mean: properties and applications; mode and median. Partition values - quartiles, deciles, and percentiles. Measures of Variation: Range, quartile deviation and mean deviation; Variance and Standard deviation: calculation and properties.

(10 Hrs)

Unit IV: Bi Variate Analysis: Simple Linear Correlation Analysis: Meaning, and measurement. Karl Pearson's co-efficient and Spearman's rank correlation, Simple Linear Regression Analysis: Regression equations and estimation. Relationship between correlation and regression coefficients.

(10 Hrs)

Unit V: Time-based Data: Index Numbers and Time-Series Analysis-: Meaning and uses of index numbers; Construction of index numbers: Aggregative and average of relatives – simple and weighted, Tests of adequacy of index numbers, Construction of consumer price indices. Components of time series; additive and multiplicative models; Trend analysis: Finding trend by moving average method and fitting of linear trend line using principle of least squares.

(09 Hrs)

Textbooks:

S. No.	Name of the Books	Name of the Author	Publisher Name	Edition (Pub. Yr.)
1.	Mathematics for Business and Social Sciences Perspective	Mizrahi and John Sullivan	Wiley and Sons.	4th (2012)
2	Business Statistics- A First Course	David M. Levine	Pearson Education	7th (2017)

Reference Books:

S. No.	Name of the Books	Name of the Author	Publisher Name	Edition (Pub. Yr.)
1.	Business Statistics: Communicating with Numbers	Sanjiv Jaggia and Alison Kelly	McGraw Hill	3rd (2021)