BBA II Year	BBA-S404		Semester-IV		
	Statistics for Business Decisions				
Time Allotted for End Semester Examination	Marks Allotted for Internal Assessment	Marks Allotted for End Term Examination(ESE)	Maximum Marks (MM)	Total Credits	Maximum Hours
3 Hrs.	30(20+10)	70	100	04	40

	Course Outcomes:	Mapped Program Outcomes
CO.1	Understand the basics of statistics and its application in Business problems.	PO.1, PO.2
CO.2	Develop an understanding of univariate, bivariate and multivariate statistical methods.	PO.1
CO.3	Employ the tools related to statistics in solving complex business problems.	PO.6, PO.7, PO.8
CO.4	Recognise, formulate and apply the solutions after diagnosing statistical problems.	PO.1, PO.2, PO.5,PO.6,PO.7
CO.5	To visualize and validate data through statistical tools and effectively communicate the output.	PO.3, PO.4,PO.5, PO.6.

- Measures of Central Value: Characteristics of an ideal measure; Measures of Central Tendency -mean, median, mode, harmonic mean and geometric mean. Merits, Limitations and Suitability of averages. Relationship between averages **(8 hours)**
- Measures of Dispersion: Meaning and Significance. Absolute and Relative measures of dispersion - Range, Quartile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation, Moments, Skewness, Kurtosis. **(8 hours)**
- Correlation Analysis: Meaning and significance. Correlation and Causation, Types of correlation. Methods of studying simple correlation - Scatter diagram, Karl Pearson's coefficient of correlation, Spearman's Rank correlation coefficient. **(8 hours)**
- Analysis of Time Series: Meaning and significance. Utility, Components of time series, Models (Additive and Multiplicative), Measurement of trend: Method of least squares, Parabolic trend and logarithmic trend**(8 Hours)**
- Probability: Meaning and need. Theorems of addition and multiplication. Conditional probability. Bayes' theorem, Random Variable- discrete and continuous. **(8 Hours)**

SUGGESTED READINGS:

1. Anderson, D.R., Sweeney, D.J., Williams, T.A., Camm, J.D., Cochran, J.J., Fry, M.J., & Ohlmann, J.W.,(2013). *Quantitative Methods for Business*. Cencage Learning, New Delhi.

2. Brandimarte, P., (2012). *Quantitative Methods: An Introduction for Business Management*. John Wiley & Sons,USA.

3. Levine, D.M, Kribbeil ,T. C, Berenson.M and Vishawanath, P.K.(2011). *Basic Statistics: A First Course*. Pearson Education. New Delhi.

4. Levin R.I. and Rubin, D.S.(2013). *Statistics for Management*; 9th ed.Pearson Education. New Delhi.

5. Lind Douglas A.Marchal William G.Wathen Samuel A. (2021), *Statistical Techniques in Business and Economics* 17th Edition McGraw Hill Publishers.

NOTE: The list of cases, specific references and books including recent articles will be announced in the class by concerned teachers from time to time.