Faculty of Commerce & Management
Bachelor of Business Management (MBA)
(W. E. F.: 2023-24)

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Name of Faculty	:	Faculty of Commerce & Management
Name of Program	:	Bachelor of Business Management (MBA)
Course Code	:	1MAS01
Course Title	:	Advanced Statistical Methods
Type of Course	:	Basic Management (BM)
Year of Introduction	:	2023-24

Prerequisite	:	--
Course Objective	:	Gain a comprehensive understanding of statistical concepts, applications, and techniques, including measures of central tendency, measures of dispersion, coefficient of skewness, and coefficient of variation, enabling effective analysis and interpretation of data in various fields.
Course Outcomes	:	At the end of this course, students will be able to:
	CO1	Recognize the significance, limitations, origin and development of statistics.
	CO2	Acquire the knowledge about different managerial applications of statistics in various fields in modern times and analyse the use of computers in statistics.
	CO3	Discuss various types of measures of central tendency and measures of dispersion.
	CO4	Analyze the different types of coefficient of skewness and the coefficient of variation

Teaching and Examination Scheme

Teaching Scheme (Contact Hours)			**Credits**	**Examination Marks**				
				Theory Marks		**Practical Marks**		**Total Marks**
L	**T**	**P**	**C**	**SEE**	**CIA**	**SEE**	**CIA**	
3	0	0	3	70	30	0	0	100

Legends: ***L****-Lecture;* ***T****–Tutorial/Teacher Guided Theory Practice;* ***P****– Practical,****C*** *– Credit,* ***SEE*** *– Semester End Examination,* ***CIA*** *- Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.))*

Course Content

Module No.	Topics	Teaching Hours	Weightage	Mapping with COs
1	**Introduction to Statistics** Definition, functions, scope and limitations, Collection and presentation of data, frequency distribution, measures of central tendency - Mean, Median, Mode, Geometric mean, Harmonic mean. **Measures of dispersion** Range – Quartile Deviation – Mean Deviation - Standard Deviation – Variance-Coefficient of Variance - Comparison of various measures of Dispersion.	8	20%	CO1
2	**Correlation and Regression** Scatter Diagram, Karl Pearson correlation, Spearman's Rank correlation (one way table only), simple and multiple regressions (problems on simple regression only)	7	15%	CO2
3	**Probability Distribution:** Concept and definition - Rules of probability – Random variables – Concept of probability distribution – Theoretical probability distributions: Binomial, Poisson, Normal and Exponential – Bay's theorem (No derivation) (Problems only on Binomial, Poisson and Normal).	9	25%	CO3
4	**Hypotheses** Types, characteristics, source, formulation of hypotheses, errors in hypotheses. Parametric and Non-Parametric Tests- t-test, z-test, f-test, (problems on all tests). Normality and reliability of hypothesis. Statistical analysis- Bivariate and Multivariate Analysis- ANOVA-one-way, two-way classification (theory only).	11	25%	CO4
5	**Tabulation of univariate** Bi variate and multi variate data, data classification and tabulation, diagrammatic and graphical representation of data. One dimensional, two dimensional and three-dimensional diagrams and graphs.	10	15%	CO4

Reference Books

Sr. No.	Name of Reference Books
1	Statistical Data Analysis ' Kenneth J Koehler, Mervyn G Marasinghe'
2	Statistics in short 'Nobin Chandra Paul'
3	Fundamentals of Statistics S C Gupta Himalaya Publications 2012
4	Statistical Methods Dr. S P Gupta Sultan Chand Publications 2014
5	J. N. Kapur and H. C. Saxena, Mathematical Statistics, S Chand and Company Ltd.,2013

List of Journals / Periodicals / Magazines / Newspapers / Web resources, etc

Sr. No.	Name of Journals / Periodicals / Magazines / Newspapers / Web resources, etc
1	https://bookboon.com/en/statistics-and-mathematics-ebooks
2	https://www.investopedia.com/