Master of Business Administration
MBA Semester I
Core Course

102: Business Statistics

Marks: 100   **Duration: 60 Hrs.**
CREDITS: 4

Objective: The objective of the course is to make the students familiar with some basic statistical techniques. The main focus however is in the application of these tools and techniques in business decision.

Course Outcomes: The successful completionof this course shall enable the student to:

CO1: Understand the statistical tools and the calculation of various measures of central tendency

CO2: Analyze and apply the concepts of statistics in decision making

CO3: Compare the data of different organizations/departments and formulate hypothesis for future operations

CO4: Do better quantitative research by applying latest technology and software available

CO5: Do better research and make quality project reports.

Contents:

UNIT	Content	Hours
I	Introduction, Definition of Statistics, Process of Statistical Investigation, Frequency Distribution and their Analysis – Measures of Central Tendency, Measures of Dispersion.	11
II	Correlation Analysis, Introduction to Multiple and Partial Correlation, Regression Analysis: Estimation using Regression Lines. Probability theory and Probability Distributions – Binomial, Poisson and Normal Distributions.	10
III	Estimation – Point Estimation and Interval estimation. Hypothesis Testing – One sample test, Two Sample Test, T-Test, F-Test, And Analysis of Variance.	10
IV	Non-Parametric Tests, Advantages of Non-Parametric Test, Chi-Square Test, The Sign Test, Rank Sum Test, The Kruskal-Wallis Test, Spearman's Rank Correlation Test.	11
V	Time Series – Variations in Time Series Trend Analysis, Methods of Measuring Trend Cyclical Variations, Seasonal Variations	10
	Small group learning exercise involving discussion, presentations by students	8
	TOTAL	60

Readings (Unit Wise)

Unit-I
1. S.P.Gupta (2021), Business Statistics, Sultan Chand & Sons Publications
2. Levin & Rubin (1994) Statistics for Management, Pearson.

Unit-II)
1. S.P.Gupta (2021), Business Statistics, Sultan Chand & Sons Publications
2. Levin & Rubin (1994) Statistics for Management, Pearson.

Unit-III
1. S.P.Gupta (2021), Business Statistics, Sultan Chand & Sons Publications
2. Levin & Rubin (1994) Statistics for Management, Pearson.

Unit-IV
1. S.P.Gupta (2021), Business Statistics, Sultan Chand & Sons Publications
2. Levin & Rubin (1994) Statistics for Management, Pearson.

Unit-V
1. S.P.Gupta (2021), Business Statistics, Sultan Chand & Sons Publications
2. Levin & Rubin (1994) Statistics for Management, Pearson.

Additional Readings

1. Aczel, Amir D., Sounderpandian, J.,&Saravanan P. (2012).Complete Business Statistics (7th ed.). India: McGraw Hill Education India Private Limited.
2. Albright, S.C.,& Winston, W.L. (2015).Business Analytics: Data Analysis and Decision Making (5th ed.). Cengage Publications.
3. Anderson, D., Sweeney, D., Williams, T., Camm, J., & Cochran, J. (2014). Statistics for Business &Economics (12th ed.). India: Cengage Learning.
4. Anderson, D., Sweeney, D., Williams, T., Martin, R.K. (2012). An Introduction to Management Science: Quantitative Approaches to Decision Making (13th ed.). India: Cengage Learning.
5. Balakrishnan, N., Render, B., Stair, R. M., & Munson, C. (2017). Managerial decision modeling. Upper Saddle River, Pearson Education.
6. Powell, S. G., & Baker, K. R. (2017). Business analytics: The art of modeling with spreadsheets. Wiley.
7. Stine, R.E., & Foster, D. (2013). Statistics for Business: Decision Making and Analysis (2nd ed.). India: Pearson Education.

Pedagogy:
- ICT enabled Classroom teaching
- Case study
- Practical / live assignment
- Interactive classroom discussions
- Flipped classroom

Teaching Plan:

At the beginning of each semester faculty teaching the course will provide (i) Teaching Plan, (ii) updated reading list, and (iii) the list of case studies for uploading on Department website.

Facilitating the achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
I	Ability to understand the meaning, scopeand importance of statistics in business	Lecture/Video/ Case/ Presentation/Role Play	Class participation, Presentation, Viva, analysis of case study, Problem based test
II	Ability to understandthe concepts of partial correlation regression and its applications.	Lecture/Video/ Case/ Presentation/Role Play	Class participation, Presentation, Viva, analysis of case study, Problem based test
III	Ability to understandabout estimation and hypothesis testing	Lecture/Video/ Case/ Presentation/Role Play	Class participation, Presentation, Viva, analysis of case study, Problem based test
IV	Ability to learnabout the non-parametric tests and its applications	Lecture/Video/ Case/ Presentation/Role Play	Class participation, Presentation, Viva, analysis of case study, Problem based test
V	Ability to understand about times series analysis and Methods of Measuring Trend Cyclical Variations, Seasonal Variations	Lecture/Video/ Case/ Presentation/Role Play	Class participation, Presentation, Viva, analysis of case study, Problem based test