Karnatak Law Society's
Institute of Management Education and Research
(Autonomous)

Lesson Plan

Course: STATISTICS FOR MANAGERS
Course Code: 25DSC107

Semester: I Division: B Academic Year: 2025-26
Duration of Session: 60 Min. No. of Sessions: 50

Course Objectives:

1. To provide basic ideas on various statistical tools.
2. To Apply Techniques to collect, analyse and interpret numerical data
3. To understand MS Excel, Power Bi for applying statistical tools

Learning Outcomes:

1. CO-1: Classify data using data Summarization tools & Apply statistical tools like measures of central tendency
2. CO-2: Apply measures of dispersion to analyse different data sets & Statistical tools of correlation for ungrouped data
3. CO-3: Apply regression too analyse data sets & time series & Apply Counting Techniques, Basic Rules of Probability and Probability distribution (Binomial, Poisson. Normal Distribution)
4. CO-4: Demonstrate understanding of the tools used for data visualization Demonstrate understanding of the importance of analytics inHR, Marketing and Finance
5. CO-5: Analyze Statistical data using MS-Excel

Sl. No	Date	Timings	Topics to be Covered	Activities/Exercises (if any)
1	11-11-2025	02:30 PM to 03:30 PM	Introduction of Students- General discussion on code of conduct, Expectation from MBA students. Data Analytics- Discussion on use of Statistics in Machine learning, Deep learning and Artificial Intelligence.	
2	13-11-2025	11:30 PM to 12:30 PM	Introduction to Syllabus- Data Preparation, Measures of Central Tendency, Measures of Dispersion. Introduction to Syllabus- Correlation, Regression, Time Series and Data Analysis, Probability & Probability Distributions, Data Visualization	Videos Shown
3	14-11-2025	10:30 AM to 11:30 AM	Introduction to Statistics, Definition, Characteristics. Methodology of Statistics- Formulation of the Problem,	Assignment No: 1- Introduction

			Objectives of study	**to Statistics on Google Class room**
4	17-11-2025	12:30 PM to 01:30 PM	Determining sources of data, Collection of Data, Organizing the data. Presentation of data, Analysis of data, Interpretation of data, Presenting the findings	**Assignment No: 2- Collection of Data on Google Class room**
5	18-11-2025	02:30 PM to 03:30 PM	Importance of Statistics, Application of Statistics, Limitations of Statistics, Mistrust of Statistics. Collection of Data- Data definition, Sources of collecting data- Primary Sources of Data	
6	20-11-2025	11:30 PM to 12:30 PM	Secondary sources of data, Variables, Attributes, Constant. Discrete Data, Continuous data, Classification of data, Bases of Classification, Geographical Classification, Chronological Classification	**Using websites like tradingeconomics.com to show sources of data**
7	21-11-2025	10:30 AM to 11:30 AM	Qualitative classification, Quantitative Classification. Introduction to Frequency Distribution, Single dimensional Classification- Discrete frequency distribution- Cases	
8	24-11-2025	12:30 PM to 01:30 PM	Continuous frequency distribution - Definitions and cases. Case on Continuous Frequency distribution, Cumulative Frequency distribution- Less than cumulative frequency distribution, More than cumulative frequency distribution, Case on Cumulative Frequency distribution	**Assignment No: 3 - Frequency distribution on Google Class room**
9	25-11-2025	02:30 PM to 03:30 PM	Cumulative Frequency curves: Case on Less than Ogive, Case on More than Ogive, Case on computing Median Graphically. Converting Less than cumulative frequency distribution to Continuous frequency distribution, Converting More than cumulative frequency distribution to Continuous frequency distribution, Tabulation- Main parts of statistical table	**Cases on Excel & Graph book**
10	27-11-2025	11:30 PM to 12:30 PM	Cases on Tabulation	
11	28-11-2025	10:30 AM to 11:30 AM	Diagrammatic representation of Data- Single dimensional diagram- Line diagram, Bar diagram, Multiple bar diagram	**Cases on Excel & Graph book**

12	01-12-2025	12:30 PM to 01:30 PM	Subdivided bar diagram- Excel & Graph book, Percentage sub divided bar diagram-Excel & Graph book	
13	02-12-2025	02:30 PM to 03:30 PM	Broken bar diagram, Deviation bar diagram, Duo-Directional Bar Diagram, Sliding Bar diagram, Pyramid Diagram, Two Dimensional diagram: Rectangular Diagram, Square Diagram, Pie Chart or circle diagram- Excel & Graph book	**Cases on Excel & Graph book Assignment No: 4(Excel) Diagrammatic Representations of Data on Google Classroom**
14	04-12-2025	11:30 PM to 12:30 PM	Two Dimensional diagram: Rectangular Diagram, Square Diagram, Pie Chart or circle diagram, Three dimensional diagram: Cubes, Pictograms, Cartogram- Excel & Graph book	**Cases on Excel & Graph book Assignment No:5 (Graph Book) Diagrammatic Representations of Data on Google Classroom**
15	05-12-2025	10:30 AM to 11:30 AM	Graphical Presentation of data, 1. Time Series graphs: False Base line graph, Net Balance graph, Band graph, 2. Frequency graph: Histogram, Frequency polygon	**Cases on Excel & Graph book**
16	08-12-2025	12:30 PM to 01:30 PM	2. Frequency graph: Histogram, Frequency polygon, Frequency curve, Cumulative frequency curve or ogives, Calculating median graphically	**Assignment No: 6 Frequency distribution of Stock prices on Google Classroom**
17	09-12-2025	02:30 PM to 03:30 PM	Measures Of Central Tendency Average: Definition, Functions of an average, Characteristics of a Good Average, Types of average, 1. Arithmetic mean : i)Arithmetic Mean for Ungrouped data a.Direct method b.Short cut method, c.Step deviation Method, Cases on all three methods	
18	11-12-2025	11:30 PM to 12:30 PM	Arithmetic Mean for grouped data (Discrete frequency distribution)- Cases using Direct Method, Shortcut method & Step deviation method	

19	12-12-2025	10:30 AM to 11:30 AM	Arithmetic Mean for grouped data (Continuous frequency distribution)- Cases using direct method, Shortcut method and Step deviation method	**Assignment No: 7 Measures of Central Tendencies on Google Classroom**
20	15-12-2025	12:30 PM to 01:30 PM	Combined Arithmetic mean- Cases, Merits of Arithmetic Mean, Limitations / Demerits of Mean, Median- Definition, i) Median for Ungrouped data- Cases	
21	16-12-2025	02:30 PM to 03:30 PM	ii) Median for grouped data (Discrete frequency distribution)- Cases, Median for grouped data (Continuous frequency distribution)- Cases	
22	18-12-2025	11:30 PM to 12:30 PM	Median for grouped data (Continuous frequency distribution)- Cases, Merits of Median, Demerits of Median	
23	19-12-2025	10:30 AM to 11:30 AM	Mode- Definition, Bi-modal distribution, multi-modal distribution, uni-modal distribution, Mode for grouped data (Discrete frequency distribution)- Cases, Mode for Bimodal distribution, Mode for grouped data (Continuous frequency distribution)- Cases, Calculating mode graphically.	
24	22-12-2025	12:30 PM to 01:30 PM	Case on Mode using empirical relation between the Mean, Median and Mode, Cases on Missing frequency for Median & Mode	
25	23-12-2025	02:30 PM to 03:30 PM	Case on Mode using empirical relation between the Mean, Median and Mode, Geometric Mean- Definition, Merits of GM, Demerits of GM, Harmonic Mean- Definition, Merits of HM, Demerits of HM, Skewness and Kurtosis- Definitions and examples	
26	26-12-2025	10:30 AM to 11:30 AM	Measures Of Dispersion- Definition, Objective of Measures of Dispersion, Types of Measures of Dispersion, Range- Definition, Absolute measure- Range, Relative measure - Coefficient of Range, Cases, Range Merits , Limitations , Inter Quartile Range and Quartile Deviation (QD), Quartile Deviation for ungrouped data- Case, Quartile Deviation for grouped data(Discrete frequency distribution)- Case	
27	29-12-2025	12:30 PM to 01:30 PM	Quartile Deviation for grouped data(Discrete frequency distribution)-	

			Cases, Quartile Deviation for grouped data(Continuous frequency distribution)- Cases, Merits of Quartile Deviation, Demerits of Quartile Deviation	
28	30-12-2025	02:30 PM to 03:30 PM	Mean Deviation -Theory, Standard Deviation- Definition, Cases on Standard Deviation for Ungrouped data	**Assignment No: 8 Measures of dispersion – Standard Deviation on Google Classroom**
29	01-01-2026	11:30 PM to 12:30 PM	Combined Standard deviation for two sets of data- Cases	
30	02-01-2026	10:30 AM to 11:30 AM	Standard Deviation for grouped data (Continuous frequency distribution)- Cases	
31	05-01-2026	12:30 PM to 01:30 PM	Correlation analysis, Types of Correlation, Correlation and Causation, Spurious or Nonsense Correlation, Methods to find Correlation, Scatter diagram	
32	06-01-2026	02:30 PM to 03:30 PM	Cases on Karl Pearson Coefficient of Correlation, Spearman's Rank Correlation- Definition, Cases on Spearman's Rank Correlation when Ranks are not given	
33	08-01-2026	11:30 PM to 12:30 PM	Karl Pearson Coefficient of Correlation - Case using direct method and shortcut method	**Assignment No: 9 Coefficient of Correlation on Google Classroom**
34	09-01-2026	10:30 AM to 11:30 AM	Rank Correlation when Ranks are given, Rank Correlation when Ranks are equal, Rank Correlation for three sets of data	
35	12-01-2026	12:30 PM to 01:30 PM	Properties of Correlation, Merits & Demerits of Correlation. Regression-Linear & Non-linear regression, Regression equation of X on Y (X is dependent on Y), Regression equation of Y on X (Y is dependent on X)	
36	13-01-2026	02:30 PM to 03:30 PM	Case on Regression when SD and Correlation are given	**Assignment No: 10 Application**

				of Statistical tools in Microsoft Excel on Google Classroom
37	15-01-2026	11:30 PM to 12:30 PM	Cases on Linear Regression analysis, Case on evaluating Correlation coefficient using two regression coefficients	
38	16-01-2026	10:30 AM to 11:30 AM	Cases on Method of least squares, Time series Analysis- Introduction, definition, Importance of time series analysis	
39	19-01-2026	12:30 PM to 01:30 PM	Probability Theory- Basic Terminologies of probability- Experiment, Events, Sample space, Mutually Exclusive Events (Disjoint Events), Definition – Probability, Case on definition of probability, Types of probability- 1. Classical approach, 2. Relative frequency approach, 3. Subjective approach, Axioms /Rules/ Laws of probability, Addition rule for mutually exclusive events- Case	
40	20-01-2026	02:30 PM to 03:30 PM	Components of a time series, Methods of estimating trend- The free hand method, The method of moving averages- Case on The method of moving averages, Standard Error of Estimate, Properties of Regression	
41	22-01-2026	11:30 PM to 12:30 PM	Probability Distribution-Random Variable, Discrete Random Variable, Discrete Probability Distribution- Binomial distribution - Probability Mass Function- Cases	
42	23-01-2026	10:30 AM to 11:30 AM	Conditional probability under statistical dependence, Bayes theorem- Cases	
43	27-01-2026	02:30 PM to 03:30 PM	Cases on Binomial Distribution	
44	29-01-2026	11:30 PM to 12:30 PM	Normal distribution - Definition, Characteristics of Normal distribution, Probability Density Function (pdf), Standard Normal Curve, Cases on Normal distribution	
45	30-01-2026	10:30 AM to 11:30 AM	Poisson Distribution- Definition, Meaning, Mean and Variance of Poisson distribution, Cases on Poisson distribution	
46	02-02-2026	12:30 PM to 01:30 PM	Heat Maps, Infographics and Dashboard, Power BI, Google fusion tables	

47	03-02-2026	02:30 PM to 03:30 PM	Machine Learning- Machine Learning Methods, Supervised learning algorithms , Unsupervised learning, Semi supervised learning , Reinforcement learning	
48	05-02-2026	11:30 PM to 12:30 PM	Module 4- Data Visualization, Definition, Data Visualization Important, Benefits of Data Visualization, Techniques Used for Data Visualization- Infographics, Heatmap Visualization, Fever Charts, Area Chart (or Graph), Histogram, Uses of Data Visualization	**Display Heat Maps, Infographics and Dashboard, Power BI, Google fusion tables**
49	06-02-2026	10:30 AM to 11:30 AM	Autoregressive integrated moving average (ARIMA), Marketing Analytics, Importance of Marketing Analytics, Components of marketing analytics	
50	09-02-2026	12:30 PM to 01:30 PM	How Organizations Use Marketing Analytics, Financial Analytics, Importance of financial analytics, Types of financial analysis	

Course Faculty: Rahul Mailcontractor

Director: Dr. Arif Shaikh