Progressive Education Society's

Modern College of Arts, Science and Commerce,

Shivajinagar, Pune - 5

First Year of B.Com.
(Course under NEP 2020)

Course Code: 24CoBstU1111 **Course Name: Business Analytics -I**

Teaching Scheme: 2 Hours/Week **Credit: 2**

Examination Scheme: CIA: 20 Marks **End-Sem : 30 Marks**

Prerequisite Courses:
- Basic concepts of mathematics.

Course Objectives:
- To understand scope and importance of Statistics.
- To study different types of data.
- To study Statistical Population and sample.
- To do graphical representation of the data.
- To compute different types of measures of central tendency and dispersion

Course Outcomes:

On completion of the course, student will be able to
- Applications of Statistics in different fields.
- Categories data set according to the types of data sets.
- Do exploratory data analysis.
- Compute the appropriate measures of central tendency for the data set.
- Compute the appropriate measures of dispersion for the data set.

Course Contents

Unit 1	Classification and frequency distribution	9 L
	● Definition of Statistics and its importance in banking, finance, Government sector etc. ● Scope of statistics (economics, management Science, and industry). ● Concept of population and sample. ● Qualitative and Quantitative variables. ● Raw data and its classification. ● Frequency distribution, Cumulative frequency distribution and Relative Frequency distribution. ● Graphical and diagrammatic representation of data : Histogram (for uniform class interval), Frequency curve and cumulative frequency curve (Ogive curves) Pie diagram, bar diagram, Subdivided bar diagram, multiple bar diagram. ● Interpretation of data using diagramsand graphs.	
Unit 2	Measures of Central Tendency	12 L
	● Introduction of measures of central tendency. ● Arithmetic mean (A. M) or Mean. ● Mean of combined group ● Median for ungrouped data and grouped data. ● Mode for ungrouped data and grouped data.	

	• Median and mode using graphs. • Merits and Demerits of Mean, Median and Mode. • Empirical Relation between Mean, Median and Mode.	
Unit 3	Measures of Dispersion	9L
	• Meaning of Dispersion • Measures of Dispersion (range , variance and standard deviation for grouped and ungrouped data) • Standard deviation for combined group. • Measures of relative dispersion (Coefficient of range, Coefficient of variation)	

Reference Books:

1) Richard Levin and David Rubin (1991), Statistics for Management, Fifth Edition, Prentice Hall.
2) Amir D. Aczel and Jayavel Sounderpandian (2002), Complete Business Statistics, Tata McGraw- Hill Publishing Company.
3) S.P. Gupta (2021), Statistical Methods, Sultan chand and Sons publication.
4) G.V.Shenoy, U.K. Srivastava and S.C.Sharma(2001), Business Statistics, Wiley Eastern Limited.
5) A V Rayarikar and P G Dixit : Business Mathematics and Statistics : Nirali Publishers ,Pune

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First Year of B.Com.
(Course under NEP 2020)

Course Code: 24CoBstU2111 **Course Name : Business Analytics –II**
Teaching Scheme: 2 Hours/Week **Credit: 2**

Examination Scheme: CIA: 20 Marks **End-Sem : 30 Marks**
Prerequisite Courses: Knowledge of the topics in Business analytics I .

Course Objectives:
- To understand the concept of Correlation and regression.
- To understand the concept of index number.

Course Outcomes:

On completion of the course, student will be able to–
- understand applications of statistics in different fields.

Course Contents

Unit 1	Correlation	9 L
	• Bivariate data and scatter diagram • Types of correlation • Karl pearsons coefficient of correlation (Ungrouped data only) • Spearman Rank Correlation coefficient for rank data (without tie).	
Unit 2	Regression	8 L
	• Regression (Y response X: regressor), Regression model: Y= a + bx + ε • Equation of line of regression of Y on X • Applications of Correlation and Regression.	
Unit 3	Index Number	13 L
	• Concept of Index number • Types of Index number (Price and quantity Index number) • Construction of Price index number • Laspeyre's, paasche's and Fisher Index number. • Cost of living / Consumer Price index number, SENSEX and NIFTY • Family budget and aggregate expenditure method • Application and limitations of Index number.	

Reference Books :

1) Amir D. Aczel and Jayavel Sounderpandian (2002), Complete Business Statistics, Tata McGraw- Hill Publishing Company.

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3) Richard Levin and David Rubin (1991), Statistics for Management, Fifth Edition, Prentice Hall.

4) S.P. Gupta (2021), Statistical Methods, Sultan chand and Sons publication.