B.COM. SEMESTER – 1

3	MINOR 1	ADVANCE BUSINESS STATISTICS - 1

Name of the Course: **Advance Business Statistics - 1**
Course credit: **04**
Teaching Hours: **60 (Hours)**
Total marks: **100 (Internal 30Marks/External 70Marks)**

Objectives:
1. To collected data in terms of experimental designs and statistical surveys.
2. Organizing and summarizing the data.
3. Analyzing the data and drawing conclusions from it

Learning Outcomes:
After completion of the course, learners will be able to:
1. Examine and understand the various descriptive properties of statistical data.
2. Solve applied problems in differential and integral calculus;
3. Differentiate between various sampling techniques
4. Analyse the underlying relationships between the variables to use simple regression Models.
5. Examine and apply index numbers to real life situations.
6. To learn rigorous development of statistics that emphasizes the definition and study of numerical measures that describes population variables

PARTICULAR	NO. OF LECTURES
UNIT NO. 1 : DISPERSION AND SKEWNESS	
- Measurement of Dispersion - Coefficient of variation - Variance - Measurement of skew ness 1. Method of Karl Pearson's 2. Method of Bowley - Examples	12
UNIT NO. 2 : INDEX NUMBER	
- Meaning And Definition of Index Number - Uses And Limitation of Index Number - Construction Of Wholesale Price Index Number - Method of Calculation of Index Numbers (Laspeyre's , Paasche's , Fisher) - Two Main Tests of Index Numbers - Aggregate Expenditure and Family Budget Method - Examples	12
UNIT NO. 3 : SAMPLING	
- Idea Of Population and Sample - Advantages Of Sampling and Limitation of Sampling - Characteristics Of Good Sample - With And Without Replacement Sampling - Sampling And Non-Sampling Errors - Sampling Method 1. Simple Random Sampling 2. Stratified Random Sampling - Drawing of All possible random samples of given size (Two or Three) from a population (with and without Replacement)	12

- Calculation of variance of simple random sample mean, stratified sample mean (Two or three Strata) - Examples	
UNIT NO. 4 : LINEAR CORRELATION	

- Meaning and Definition
- Types of correlation
- Methods for correlation
       1. Scatter Diagram method
       2. Karl Pearson's method
       3. Spearman's Rank method
- Probable Error and standard error of coefficient of correlation
- Coefficient of correlation Bivariate frequency distribution
- Examples
	12

UNIT NO. 5 : LINEAR REGRESSION	
- Meaning and Definition of Regression - Properties Of Regression Co-efficient - Relation Between Correlation and Regression Co-Efficient - Two Lines of Regressions - Regression Coefficients from Bivariate Frequency Distribution - Examples	**12**
Total Lectures/Hours	**60**

Suggested Readings:
1. Advance Practical Statistics : S. P.Gupta
2. Fundamental of Statistics : V. K. Kapoor and S.C. Gupta
3. Fundamental of Mathematics and Statistics : V. K. Kapoor and S.C. Gupta
4. Fundamental of Statistics : D .N Elhance

Note: Learners are advised to use latest edition of text/reference books