LESSON PLAN (Business Statistics & Research Techniques)

Step 1: PREPARATION OF LESSON PLAN FRAMEWORK (module wise) (I B.COM C)

Unit/ Session/ Hours (Time Required)	Topics For Student Preparation (Input)	Procedure (Process)	Learning Outcome (Output)	Assessment
Unit I 5hours	Importance of statistics Research-purpose –Type-step Classification of data	• Lecture • Activity (Using Excel)	**Conceptual & Skills**: Usage of statistics in research data	Assignment and practical
Unit II 13 hours	Different type Measures Mean, median, mode, SD and variance	• Lecture • Activity (Using Excel)	**Conceptual & Skills**: Measure of tendency and dispersion	Assignment, practical and test
Unit III 12 hours	Probability Random experiment Simple space	• Lecture • Activity (Using Excel)	**Conceptual & Skills**: Importance of probability in research	Assignment, practical and test
Unit IV 15 hours	Hypothesis testing Null & alternative	• Lecture • Activity (Using Excel)	**Conceptual & Skills**: Level of significance Different test	Assignment, practical and test
Unit V 10 hours	Statistical tools for research analysis	• Lecture • Activity (Using Excel)	**Conceptual & Skills**: Time series Correlation Regression	Assignment, practical and test

Unit VI **5 hours**	Diagrammatic & graphical representation data	• Lecture • Activity (excel)	**Conceptual & Skills**: Different diagram and graphs	Assignment, practical and test

LESSON PLAN PREPARATION HOURLY WISE

Subject Name: Business Statistics & Research Techniques (I .B.COM C) Hours : 60
Objective: To enhance students to grasp the fundamentals of statistics for interpreting business data. To familiarize students with the concepts and techniques of business research using MS-Excel.

Sl. No	UNIT & OBJECTIVES	No. of Lecture Hours	Methodology/Instructional techniques	Evaluation/ learning confirmation
Module I	***Introduction***	***4+1***		
1.	Importance of statistics, scope ,limitations	1	Lecture and illustration	Discussion and Practical
2.	definition of research , purpose	1	Lecture and illustration	Discussion and Practical
3.	scope and types of research , steps in research	1	Lecture and illustration	Discussion and Practical
4.	classification of data, formation of statistics series, tabulation	1	Lecture and illustration	Discussion and Practical
5.	Different type of data and tabulation	1	Activity	Activity
Module II	***Measures of central tendency and dispersion***	***13***		
1.	Mean	1	Lecture and illustration	Discussion and Practical
2.	median	1	Lecture and illustration	Discussion and Practical
3.	mode	1	Lecture and illustration	Discussion and Practical
4.	geometrics mean	1	Lecture and	Discussion and

			illustration	Practical
5.	Quartiles, Range	**2**	Lecture and illustration	Discussion and Practical
6.	quartile deviation	1	Lecture and illustration	Discussion and Practical
7.	mean deviation from mean	1	Lecture and illustration	Discussion and Practical
8.	median & mode	2	Lecture and illustration	Discussion and Practical
9.	standard deviation and coefficient of variation	3	Lecture and illustration	Discussion and Practical
Module III	***Probability***	***12***		
1.	Classical or mathematical definition of probability	**2**	Lecture and illustration	Discussion and Practical
2.	random experiment, equally likely outcomes	2	Lecture and illustration	Discussion and Practical
3.	sample space- mutually exclusive events	2	Lecture and illustration	Discussion and Practical
4.	complement of an event , dependent event, independent event,	3	Lecture and illustration	Discussion and Practical
5.	conditional probability (simple problems), importance of probability in research.	3	Lecture and illustration	Discussion and Practical
Module IV	**Hypothesis testing**	**14+1**		
1.	Formation of null and alternative hypothesis,	**3**	Lecture and illustration	Discussion and Practical
2.	level of significance, type I and type II errors,	4	Lecture and illustration	Discussion and Practical
3.	hypothesis – T-test, Z-test Test for single mean and difference between two means only.	5	Lecture and illustration	Discussion and Practical
4.	Chi-square test (simple problems).	2	Lecture and illustration	Discussion and Practical
5.	Testing of hypothesis with suitable data in excel	1	Activity	Activity
Module V	***Statistical tools for research analysis***	10		
1.	Time series and its application	2	Lecture and illustration	Discussion and Practical

2.	correlation –scatter diagram, karl person & sperman's coefficient of correlation	3	Lecture and illustration	Discussion and Practical
3.	coefficient of determination and coefficient of non determination	3	Lecture and illustration	Discussion and Practical
4.	regression analysis	2	Lecture and illustration	Discussion and Practical
Module VI	***Diagrammatic & graphical representation of data***	4+1		
1.	Diagrams: utilities , limitations, construction of one dimensional ,two dimensional and three dimensional diagrams	1	Lecture and illustration	Discussion and Practical
2.	Graphs: utilities ,limitations , constitution, frequency distribution , histogram, frequency curve and ogives	3	Lecture and illustration	Discussion and Practical
3.	Different type of graphs in Excel	1	Activity	Activity

BOOKS FOR REFERENCE

1. C.B.Gupta: Statistics, Himalaya Publications.
2. Chikkodi & B.G.Satya Prasad: Business Statistics, Himalaya Publications.
3. Dr. Asthana: Elements of Statistics , Chaitanya
4. Dr. Sancheti & Kapoor : Statistics Theory , Methods and Application.
5. Ellahance : Statistical Methods
6. S.P.Gupta : Statistical Methods, Sultan Chand ,Delhi.

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