

LESSON PLAN

Program: **B.Com(Reg)**

Subject Name: **Business Statistics & Research techniques**

Subject code: **C115AR204**

Semester: **II**

Lecture hours: **60**

Faculty in-charge: Mr.Dileep Kumar Shetty and Mr.

Vinay Pradeep

Course Coordinator: Mr.Vinay Pradeep

Course Outcome No.	Course Outcomes	T level Indicator
CO1	Describe the relevance and role of statistics in business research.	T2
CO2	Select the appropriate tool of measures of central tendency and dispersion in accordance with type of the case for Analysis.	T5
CO3	Identify from a probability scenario events that are simple, complementary, mutually exclusive, and independent.	T1
CO4	Select the appropriate test of hypothesis in accordance with type of the case for Analysis.	T5
CO5	Select the appropriate tools for Analysis in accordance with type of the case.	T5
CO6	Decide what graphs are appropriate for displaying quantitative and categorical variables.	T6

Module No. & Topics Covered	Course Outcome No.	No. of Lecture Hours	Pre-Class Activity	Instructional techniques	Assessment	T level
Module - 1 : Introduction: Importance of Statistics, Scope, Limitations, Definition of Research, purpose, scope and types of research, objectives of research, Steps in research (brief), Classification of data, Formation of statistical series, Tabulation	CO1	5	Youtube video (NPTEL)	<ul style="list-style-type: none"> • Online Videos • Lecture with the help of power Point presentation • Discussion 	Evaluation through MCQs	T2
Module-2: Measure of central tendency and dispersion: Mean, Median, Mode, Geometrics Mean, Quartiles. Range, Quartile deviation, Mean deviation from Mean, Median & Mode. Standard	CO2	13	Youtube video	<ul style="list-style-type: none"> • Lecture • Case Study • Discussion • Problem solving 	Evaluation through tests and	T5

deviation and coefficient of variation.						
Module-3: Probability: Classical or mathematical definition of probability, Random Experiment, Equally likely outcomes, Sample space. – Mutually exclusive events – Complement of an event, dependent event, independent event, conditional probability (simple problems). Importance of probability in research.	CO3	12		<ul style="list-style-type: none"> • Lecture • Discussion • Problem solving 	Evaluation through tests	T1
Module-4: Hypothesis testing: Formation of Null and alternative Hypothesis. Level of significance, Type I	CO4	15		<ul style="list-style-type: none"> • Lecture • Case Study • Discussion 	Evaluation through tests and	T5

and Type II errors, Hypothesis testing – T-test, Z-test Test for single mean and difference between two means only. Chi-Square test.				<ul style="list-style-type: none"> • Problem solving 		
Module-5: Statistical tools for Research Analysis: Time series and its application, , correlation- scatter diagram, Karl Person & Spearman's coefficient of correlation, coefficient of determination and coefficient of non determination, Regression analysis	CO5	10		<ul style="list-style-type: none"> • Lecture • Discussion • Case study • Problem solving 	Evaluation through tests and	T5
Module-6: Diagrammatic and graphical representation of data: Diagrams: Utilities, Limitations, construction of one dimensional, two dimensional and	CO6	5		<ul style="list-style-type: none"> • Lecture • Discussion • Problem 	Evaluation through MCQs, group activity and tests	T6

three dimensional diagrams. Graphs: Utilities, limitations, constitution, Frequency distribution, Histogram, Frequency polygon, Frequency Curve and Ogives.						
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Continuous Internal Assessment

- Class test 1 (before midsem exam): First week of January
- Assignment
- Class test 2 (before end sem exam): Last week of February.

Book for Reference:

- *C. B. Gupta: Statistics, Himalaya Publications.*
- *Chikkodi & B. G. Satya Prasad: Business Statistics, Himalaya Publications.*
- *Dr. Asthana: Elements of Statistics, Chaitanya.*
- *Dr. B. N. Gupta: Statistics, Sahitya Bhavan, Agra.*
- *Dr. Sancheti & Kapoor: Statistics Theory, Methods and*

Application.

- *Ellahance: Statistical Methods.*
- *S. P. Gupta: Statistical Methods, Sultan Chand, Delhi.*

Approved by:

