LESSON PLAN

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

Subject code: **C315AR204**

Semester: **II**

Lecture hours**: 60**

OBJECTIVE: To enable students to have a good knowledge on the usage of Statistical tools and techniques to analyze and interpret the data and come up with the best predictions and conclusions in the field of business.

SI. No	UNITS	No. of Lecture Hours	Methodology	Evaluation
UNIT I	**Introduction**	5		
1.	Importance of Statistics,Scope, limitations,Definition of research, scope and types of research, objectives and steps in research.	3	Lecture (Theory)	To understand the need for Statistics and its importance in the field of research

2.	Classification of data, formation of statistical series and tabulation	2	Lecture (Theory) and Data classification and tabulation	Should be able to classify and tabulate the data
UNIT II	**Measure of central tendency and dispersion**	**13**		
1.	Mean, median, mode, geometric mean, Quartiles	4	Lecture(concepts and its significance) and problems	Should know its significance and usage. Should be able interpret the results obtained using it.
2.	Range, Quartile deviation, Mean deviation from mean, median and mode.	5	Lecture(significance of the concepts) and problems	Should know its significance and should be able interpret the results obtained using it.
3.	Standard deviation and coefficient of variation	4	Its significance and problems	Should know its significance and should be able interpret the results obtained using it.
UNIT III	**Probability**	**12**		

1.	Classical or mathematical definition of probability, Random experiment, Equally likely outcomes.	3	Lecture (concepts) and real world problems	To understand the importance probability and its usage to make the best decision
2.	Sample space-mutually exclusive events-Complement of an event, dependent event, independent event	5	Illustrations and problems	Should be able to solve the simple real world problems by applying it.
3.	Conditional probability (simple problems) and importance of probability in research	4	Illustrations and real world problems	To understand the relationship between different events and to solve real world problems using Conditional probability
UNIT IV	**Hypothesis testing**	**15**		
1.	Formation of Null and alternative hypothesis. Level of significance, type I,type II errors.	6	Lecture (on hypothesis , setting up null and alternative hypothesis and errors in hypothesis testing)	Should be able set up hypothesis,test hypothesis and identify the types errors
	Hypothesis testing-T-test,z-test,Test for single mean and	9	Lecture(different types of hypothesis	To understand the

2.	difference between two means only. Chi-Square test(problems)		testing and its significance) Solving problems (Chi-Square test)	significance of Different statistical tests to test the hypothesis and come up with proper conclusion
UNIT V	**Statistical tools for Research Analysis**	**10**		
1.	Time series and its application	3	Lecture (on its significance) and solving problems	Should know its significance. To come with the best predictions by interpreting the data using it.
2.	Correlation-scattered diagram, Karl pearson and Spearman's coefficient of correlation	3	Lecture (on its significance) and solving problems	To understand its significance and its usage to interpret the data.
3.	Coefficient of determination and Coefficient of non-determination, Regression analysis	4	Lecture (on its significance) and solving problems	To understand its significance and its usage to interpret the data.
UNIT VI	**Diagrammatic and graphical representation of data**	**5**		

1.	Diagrams: Utilities, Limitations, construction of one, two and three dimensional diagram	2	Lecture(why to represent data in diagrams) and Data visualization through diagrams	Should be able to represent data in diagrams and get important info about the data
2.	Graphs: Utilities, Limitations, Frequency distribution,histogram, Frequency polygon, Frequency curve and Ogives	3	Lecture(why to represent data in graphs) and Data visualization through graphs	Should be able to represent data in graphs and get important info about the data
1.	**CIA 1** on Unit I(1st December – 4th December-2018)	1	MCQs and problems	Written test
2.	**CIA 2** on Unit V and III(19th February -23rd February-2019)	1	MCQs and problems	Written test

Prepared By: Approved By:

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