

**CORE COURSE – XI - RESEARCH METHODOLOGY AND STATISTICS****OBJECTIVE**

To enable the Students to

1. Understand the fundamental Principles and technique of methodology Concerning research and
2. Apply statistical procedure to analyse numerical data and draw inference.

S.No.	TOPIC	COURSEOUTLINE	RELATED EXPERIENCE
<b>UNIT I</b>			
	Types of Research	Different types of research and their Applications.	
	Methods of Collecting data	Conducting enquires to collect primary data source for secondary Data, preparation of schedules and questionnaires, Processing data, interview method of enquiry, training of inter-viewers Editing and coding the data.	
<b>UNIT II</b>			
	Classification And organisation Of data	Classification by the categories and measurements, discrete and continuous variables. Tabulation scheme, preparation of tabular forms, methods of Securing accuracy in tabulation	
	Representation of the data	Graphical and diagramatic representations use of Computers in data processing and Presentation.	
<b>UNIT III</b>			
	Sample surveys	Choice of the sample, random Samples systematic samples, Cluster samples/ multistage Sample and quota sample. Sources of bias and methods of Reducing bias.	
	Experimentation and thesis Writing	Principles, Planning of experiments presentation of data, writing reports, foot notes and bibliographical citations.	
<b>UNIT IV</b>			
	Measures of Central tendency	Mean, Median, mode, their relative advantages and disadvantages, Measures of Dispersion, mean deviation, coefficient of	

Variation, percentiles and percentile ranks.

Correlation Association of attributes contingency table, Correlation, coefficient of correlation and its Interpretation rank correlation, regression Equations and predictions.

#### **UNIT V**

Probability Rules and probability and its applications.

Distribution Normal, binomial, their properties importance of these distributions in statistical studies.

Large and small samples, X and F tests, tests For independence using contingency analysis of Variance and applications.

#### **SUGGESTED REFERENCES**

1. Devadas, R.P. Handbook on Methodology of Research, Sri Ramakrishna Mission vidhyalaya, 1971.
2. Shukla, M.C. and Gulshan, S.R. Statistics, Sultan Chand & Co., Ramnagar, New Delhi, 1970.
3. Gupta P.P. Statistical Methods, Sultan Chand & Co., 1977.
4. Seetharaman V.A. Textbook of Statistics, Revised edition 1973.
5. George E. Forgunson, statistical Analysis in psychology and Education, McGraw Hill Book co., 1971.
6. Ramasamy, M.P. Theory and application of statistics, Kalaikadir Publications, 1970
7. Monsen, E.R. (Ed) Research Successful statistics, American Dietetics Association T X 367, R.4 1992.