

## **Objectives**

To introduce the concept of Scientific research and the methods of conducting scientific enquiry and to introduce the Statistical tools of data analysis and report writing

### **Unit-I**

Research — Nature and scope of Research in Ecology and Social Sciences, Research Purpose, Various Steps In Scientific Research: Problem identification and selection, Review of literature, Research Design, Developing a research plan; Framing and testing of hypothesis, Survey Research, Case Study Research.

### **Unit-II**

Data Collection – Sources of Data – Primary Data – Secondary Data- Procedure of data collection, Sampling Methods – Sampling in quantitative and qualitative research, Questionnaire surveys, transect methods, Participatory Rural Appraisal, Focused Group Discussion,

### **Unit-III**

Analysis of data, Statistical Analysis – Introduction To Statistics, Standard Deviation – Coefficient of Variation, Correlation and Regression Analysis, Analysis of Variance. Introduction to SPSS (practical).

### **Unit-V**

Research Reports – Structure and Components of Research Report – Types of Report, Characteristics of Good Research Report, Pictures and Graphs, Paper publications in Scopus Index journals.

### **Unit VI**

Application of Remote Sensing and GIS in ecological and social sciences (Practical)

## **TEXT BOOKS/REFERENCES:**

1. Panneerselvam, R., Research Methodology Prentice hall of India, New Delhi, 2004.
2. Kothari CR, Research Methodology-Methods and Techniques, New Wiley Eastern ltd., Delhi, 2009.
3. Doing Social Research, Mc Graw Hill, Wilkinson & Bhanderkar- Research methodology in social sciences. Rummel & Ballaine: Business Research Methods.
4. Dr. Amarchand Research Methods.