

**Session plan for Ph.D. Coursework of “Research Methodology And Statistics (1RI3000101)”
Subject (Phase-1)**

| Session | Contents | Time |
|---------------------------------|---|------------------|
| Day 1 , Date: 21/12/2017 | | |
| 1 | Meaning and Types of Research: Basic Research, Applied Research, Modern Scientific approach to Research, Research in (Educational, Clinical, Experimental, Historical descriptive and Patent oriented Research) | 9:15 to 11:10 |
| 2 | Research Process, Designing a Research Study, Types of Research Design, Research Proposal, | 11:15 to 1:00 |
| 3 | Literature Review, Qualitative studies, Quantitative studies, Sources of Data, Various Data Collection methods | 1:45 to 3:30 |
| Day 2, Date: 22/12/2017 | | |
| 1 | Measurement and Scaling, Reliability and Validity, Selection of Measurement Scale | 9:15 to 11:10 |
| 2 | Sampling Methods, Sample Size Determination, Sampling Error, Measurement of Data, Development of Instrument for Data Collection | 11:15 to 1:00 |
| 3 | Data Analysis-Data Preparation, Descriptive Analysis using Tables, Graphs, and Charts, Introduction to Hypothesis Testing, Type-I and Type-II Error, | 1:45 to 3:30 |
| Day 3, Date: 23/12/2017 | | |
| 1 | Introduction to Data Analysis with Statistical Package, | 9:15 to 11:10 |
| 2 | Nonparametric test, Sign test, Mann-Whitney test, Kruskal-Wallis test, Run test, Rank Correlation test, Time Series and Forecasting, | 11:15 to 1:00 |
| 3 | Hypothesis Testing, Z-test, F-test, t-test, Chi-square test | 1:45 to 3:30 |