

SEMESTER – III

M.Ed. Course 308

**Advanced Research Methodology and
Inferential Statistics**

Unit – I Qualitative Research (Credit 1)

1.1 Meaning and Characteristics

1.2 Steps involved.

1.3 Difference between Qualitative and Quantitative research

- **Case study**
- **Ethnography**
- **Phenomenology**

1.4 Mixed Methods: Concept, need and Types

1.5 Need and importance of qualitative research in the field of Education.

Unit – II Techniques of qualitative data Analysis (Credit1)

2.1 Content Analysis

2.2 Coding and Classification

2.3 Categorization

2.4 Triangulation

2.5 Frequency and percentage Analysis

2.6 Trend Analysis

2.7 Utilization Of Corroborative evidences

Unit – III Analysis and Interpretation of Data (Credit 1)

3.1 Scales: Nominal, Ordinal, Interval & Ratio

3.2 Organization and tabulation of data

3.3 Graphical Representation

(i) Ogive

(ii) Pie Chart

(iii) Use of graphs in Comparison.

3.4 NPC – Properties and uses, Skewness and Kurtosis

- 3.5 Descriptive Statistics – Significance and uses of:**
- (i) Measures of Central tendency – Mean, Median, Mode.**
 - (ii) Measures of variability – Range, Q.D S.D.**
 - (iii) Measures of relative positions: Quartile, Deciles, Percentile standard scores (Z and T)**
- 3.6 (i) Correlation – Concept, types and uses; Computation of rank difference correlation and product Moment Method**
- (ii) Concept only – Bi-serial, Point bi-serial – partial and, multiple correlation, tetra choric and phi-coefficient.**
- 3.6 Regression equation and predictions**

Unit – IV Inferential Statistics (Credit 1)

4.1 Meaning of inference

4.2 Central limit theorem and its need

4.3 Concept of parameter, statistic, sampling distribution, sampling error, and standard error.

4.4 Levels of significance, confidence limits and intervals, degrees of freedom, types of error- Types I, Types II;

Tests of significance of mean and of difference between means (both large and small samples), one tailed and two tailed tests.

4.5 F-Test (one way ANOVA)

4.6 Uses and computation of chi-square test (equal and normal distribution)

4.7 Data Analysis using computers – EXCEL/SPSS

Practical Work

Study of recent research review about the unit wise course content

