## SNE 427 RESEARCH METHODS IN SPECIAL EDUCATION

**Capsule Statement**

Research is an important means of creating new knowledge and validating the existing one. It helps answer question, solve problems, develop new insights and explore a wide array of possibilities. Research is a methodological inquiry for the sake of knowledge and knowledge is what leads to human growth and development at the individual as well as the societal level be it a small community or the world at large. Any student seeking knowledge must know ways to scientifically investigate problems and issues. Quantitative and qualitative research methodologies using an analytical approach are a focus of this module. The course provides an intensive baseline for the participants to understand research in quantitative and qualitative paradigms.

### Learning Outcomes

The students will be able to

1. define research in general and as it applies to the field of education
2. critically analyze the importance and significance of research in education
3. Define and explain the terminologies and fundamental concepts in and of research
4. classify research into various categories depending on methodology
5. Differentiate between the qualitative and quantitative research paradigms
6. Identify research questions and research problems
7. Formulate research hypotheses and research questions
8. Select a research design according to the nature of the problem to be researched
9. Conduct a literature review to explore the existing knowledge in the area or topic under investigation
10. Identify and explain the use and importance of various data collection tools and select appropriate tools for the problem at hand
11. Use the scientific method of inquiry based on observation, data collection, analysis and interpretation
12. Develop or design a research proposal

### Content

**Unit 01: Introduction to Educational Research**

**Unit 02: The Scientific Method**

2.1 Introduction to Scientific Method

2.2 Application of Scientific Method

**Unit 03: Types of Research**

3.1 Basic and Applied Research

3.2 Evaluation Research

3.4 Research and Development

3.5 Action Research

**Unit 04: Approaches to Inquiry**

4.1 Quantitative Vs Qualitative

4.2 Guide lines for classification

**Unit 05: Selection and definition of a Problem**

5.1 **Selection** and statement

5.2 Review of related literature

5.3 Formulation and statement of Hypothesis

**Unit 06: Preparation and Evaluation of Research plan**

6.1 Definition and Purpose 6.2 General guide lines

6.3 Component

6.4 Evaluation

**Unit 07: Selection of a Sample**

7.1 Definition and purpose of sampling 7.2 Definition of population 7.3 Sampling Methods

7.4 Random sampling

7.5 Stratified Sampling

7.6 Cluster Sampling

7.7 Systematic Sampling

7.8 Sample Size & Sample Bias

**Unit 08: Selection of Measuring Instrument**

8.1 Purpose and process

8.2 Characteristics of Standardized Testing

(a) Validity

(b) Reliability

8.3 Types of tests

8.4 Selection of Test

8.5 Test Administration

**Unit 09: Research Types by Purpose & Method**

9.1 Historical Research

9.2 Qualitative Research

9.3 Descriptive Research

9.4 Correlation Research

9.5 Causal Comparative Research

9.6 Experimental Research

**Unit 10: Data Analysis**

10.1 Measurement levels/Scale

(a) Nominal Scale

(b) Ordinal Scale

(c) Interval Scale

(d) Ratio Scale

10.2 Scoring Procedures

Tabulation & Coding

**Unit 11: Descriptive Statistics**

11.1 Graphing Data

11.2 Measures of Central Tendency

11.3 Measure of Variability

11.4 The Normal Curve

11.5 Qualitative Data Analysis

**Unit 12: Research Proposals**

**Unit 13: Citation, Referencing and Bibliography (APA style)**

### Suggested Readings

* + Jack R. Frankel and Norman E. Wallen, (1993) How to Design and Evaluate Research in Education. New York: McGraw 1-fill Inc.
  + William Wiersma, (1995) Research Methods in Education: An Introduction. Bacon.
  + SEA, Module Essential Reading, Lahore: UMT