

M.Phil (EDUCATION)
(2021-2022 Onwards)
SYLLABUS
PART – I

**MPHARME - ADVANCED RESEARCH METHODOLOGY AND
EDUCATIONAL STATISTICS**

Course Learning Outcomes:

At the end of the course, the prospective teacher-educators will be able to

- appraise the methods of acquiring knowledge through Research;
- predict the nature of Research and employ the same in solving problems in Education;
- build on the Philosophical bases of Research;
- interpret the Normative and Interpretive paradigms in Research;
- examine the Scientific Research methods for problem solving;
- classify and apply the Humanistic Research methods according to the nature of the research problem;
- conduct policy-oriented research;
- summarize the findings of research based on qualitative analysis of data;
- incorporate advanced statistical techniques in Scientific Research; and
- apply the exhaustive knowledge acquired to conduct research in Education

UNIT 1: Research Process

(8 hrs)

Research as a process of acquisition of knowledge to understand phenomena and solve problems – Methods of acquiring knowledge – Older methods – Modern scientific Method – Steps in scientific methods – Assumption underlying scientific method – Theory building – Natures, type and functions of theories.

UNIT 2: Nature of Research**(8 hrs)**

Nature of enquiry – search for truth, social reality, positivism – understanding Natural and Social phenomena – Physical and Social reality – Ontological Epistemological, Methodological and Human – related assumptions – the Objectivist and Subjectivist polarization.

UNIT 3: Philosophical Bases of Research:**(10 hrs)**

The philosophical bases of research – positivistic and Anti – positivistic movements – Phenomenology, Symbolic interactionism – Ethno methodology – Feminists research – Ethics of educational research.

UNIT 4: Paradigms in Research**(10 hrs)**

Normative and interpretive Paradigms – “The Paradigm War” – Competing or Complementary nature of paradigms.

UNIT 5: Scientific Research Methods**(10 hrs)**

a) Hypotheses for problem solving, Construction and confirmation of Hypothesis – logic of Hypotheses testing – Null Hypothesis and its significance – Testing Hypothesis of different types.

b) Experimental research – Designs with and without control – Purpose and Methods of control – Factors to be controlled, designs with minor, partial and rigorous control – Validity of Designs – Internal and External validities – Quasi Experiments – Single case research.

UNIT 6: Humanistic Research Methods**(12 hrs)**

Humanistic research Methods: Case study Method – Critical theory model – Ethnographic research methods – Hermeneutics – Oral History method.

UNIT 7: Policy Researches (12 hrs)

Policy Researches: Policy oriented researches – legitimately Research- Participatory Research.

UNIT 8: Humanistic Research methods and Qualitative analysis of data (14hrs)

Statistical Analysis for Humanistic researches, Participant Observation: Participant Verification Procedure; Triangulation: Analysis of evidence – Qualitative Analysis of Data – Data Reduction, Matrix Display Tactics for drawing conclusions, confirming findings, Summarizing and integrating findings.

Research developments in educational research – Internet Uses – Internet based Research in Education. Simulation, Fuzzy Logic, Geographical Information systems (GIS), Needs and Evidence Based Education.

UNIT 9: Statistical Analysis for Scientific Researches (12hrs)

- a) Sampling Procedures; Probability and Non – Probability based effective sample size – Sampling Errors;
- b) Univariate and Bivariate Analysis of Variance between subject, One way, Factorial within subjects: Parameter Estimation: Association; Correlation; Regression.
- c) Multivariate Analysis: i) Relationship: Multiple R: Canonical R; ii) Group Differences: ANOVA, Factorial ANOVA: One way ANOVA, Factorial MANOVA: MANCOVA; iii) Prediction of Group Membership, Discriminant function, Factorial Discriminate function; iv) Structure: Principal component, Factor Analysis.

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