

## Programme Structure

The Pre Ph.D. Coursework in Education shall comprise of only one semester (i.e. six months) in which there will be two compulsory papers:

Sl.No.	Paper	Marks
1.	<b>Paper-I: Research Methodology and Computer Applications</b>	100
2.	<b>Paper-II: New Trends in Teacher Education</b>	100
3.	<b>Submission of two term papers (more than 7500 words) and presentation</b>	50

### **Paper –I: Research Methodology and Computer Applications**

#### **Unit-I Nature of Educational Research**

1. Meaning of research
2. Nature, scope and classification of educational research.
3. Methods of educational research
4. Formulation of research problem, sources of identifying the problem, research hypotheses, research questions.
5. Variables: nature and type

#### **Unit-II: Research Designs**

1. Research design in quantitative research: purpose of research design characteristics of good research design.
2. Experimental research
3. Quasi-Experimental research
4. Non-experimental quantitative research
5. Quantitative research
6. Case study
7. Philosophical research
8. Historical research
9. Ethnographic research

#### **Unit-III: Measurement and Research Tools**

1. Levels of measurement: nominal, ordinal, interval and ratio
2. Concept measurement in research
3. Techniques of developing a good measuring instrument
4. Guidelines for developing a questionnaire.

#### **Unit-IV: Sampling Designs**

1. Criteria for selecting a sample
2. Characteristics of a good sample
3. Types of sampling designs

#### **Unit-V: Data Analysis**

1. Descriptive statistics
2. Inferential statistics

3. Non-parametric statistics
4. Selecting appropriate statistical techniques for the research on the basis of nature of variables and levels of measurement.

**Unit-VI: Writing Research Report/Paper**

1. The beginning
2. The main body
3. Documentation: footnotes and bibliography
4. Editing the final draft
5. Check list for a good research report/research paper
6. Basic knowledge of organizing conferences, seminars, synopsis, workshop, exhibition etc.

**Unit-VII: Introduction of Computer**

1. Defining and Block diagram of computer, classification of computer
2. Components of computer, hardware (CPU, Monitor, Key-board, etc.)
3. Software (DOS, Basic, COBAL)
4. What is OS? function of an OS (Operating System)
5. OS as a resources manager, types of OS, features of OS, concept of warm and cold booting, swapping, spooling and buffering

**UNIT-VIII: MS Office and Data Analysis Software**

1. MSWord: introduction of word processor, creating and saving documents, using thesaurus
2. MS Excel: introduction of excel, need of spreadsheet creating, opening and saving workbook, editing worksheet, using links, applying different views, types of functions.
3. Ms Power Point: introduction of slides, speaker, notes, media clips, graphs, picture, web pages, adding different kinds of slides, working with power points, inserting text objects, formatting text
4. Introduction to data analysis software SPSS and its applications, Chisquare and ANOVA through SPSS Software

**UNIT-IX: Educational and Research resources**

1. Educational and Research resources- Encyclopedia, Wikipedia, online tutorials and lectures, electronic journals, E-books, digital libraries
2. What is plagiarism and how to avoid it?

**Suggested readings:**

**(For Research Methodology)**

1. Best, John W.: Research in Education
2. Garret, H.E.: Statistics in Psychology and Education
3. Kapil, H.K.: Shaikshik Anusandhan
4. Gupta, S.P.: Statistical Techniques
5. Lindquist, E.F.: Design and Analysis in Psychology and Education
6. Siegel, S.: Non parametric statistics for Behaviour Sciences.
7. Tuckman, B. W.: Conducting, Educational Research. New York: Harcourt Bruce, Jouanovich Inc.

**(For Computer Applications)**

1. P.K. Sinha “Computer Fundamentals”, BPB Publications, 1992.
2. Guy-Hart Davis “The ABCs of Microsoft Office 97 Professional edition” BPB Publication, 1998.
3. Karl Schwartz, “Microsoft Window 98 Training Guide” 1998
4. Write and Publish a Scientific Paper by Robert A. Day Oryx Press
5. Scientific Easy when you know how by Jennifer Peat BMJ Books.
6. Research Project and Research Proposals a guide for scientists seeking funding by paul G. Chapin Cambridge University Press.

**Paper-II**

**New Trends in Teacher Education**

1. Collaborative learning
2. Virtual learning
3. Smart class rooms
4. Life skill education
5. Peace education
6. Experimental learning
7. Constructivism in education
8. Wiki educator
9. E-learning
10. E-Content
11. Co-operative learning
12. Education for democratic citizenship
13. Inclusive education
14. Human rights in education
15. National Curriculum Framework-2009
16. The Act on Education as a Fundamental Right
17. Collective Wisdom
18. Academic Performance Index (API)