

Allied Health Sciences
Research Methodology - Syllabys

Total Lecture Hours: 60
Credits: 4

UNIT I – INTRODUCTION TO RESEARCH

Meaning, objectives and types of research, Characteristics of good research, Research problem – selection and formulation, Literature review and identification of research gap, Research objectives and hypothesis

UNIT II – SAMPLING AND DATA COLLECTION

Sampling methods – Probability and Non-probability sampling, Methods of data collection, Questionnaire, interview and observation, Validity and reliability, Focus Group Discussion
Primary and secondary data

UNIT III – RESEARCH METHODS AND DESIGN

(I) Quantitative Methods:

Experimental Method/Research —Manipulation/content of variables; Research Strategies: Experimental (bivalent, multivalent, and parametric), Descriptive (comparative, developmental, correlational, and survey). Research designs: within groups, between groups, and mixed types. Non-experimental/descriptive method/research: survey, causal, comparative, and correlational; predictive and exploratory, cross-sectional, longitudinal (trend and panel studies).

(II) Qualitative Methods:

- Case study, phenomenology, ethnography, grounded theory-characteristics, types, data collection, analysis, and report writing.
- Mixed research—principles, strengths, and weaknesses.

UNIT IV – BIOSTATISTICS

Types and presentation of data, Descriptive and inferential statistics, Measures of central tendency – Mean, Median and Mode, Measures of dispersion – Standard deviation, Correlation, t-test, Chi-square test and ANOVA, Parametric and non-parametric tests and Basics of SPSS

UNIT V – RESEARCH REPORTING

Structure of a research report/thesis, Components of a research report – Introduction, Literature Review, Methodology, Results and Discussion, Presentation of research findings – Tables, graphs and figures, Abstract and synopsis writing, Referencing and citation, Scientific writing and
VMRF-DU Ph.D Research Methodology Syllabus 2025

presentation of research findings.

Core References

1. Kothari CR, Garg G. *Research Methodology: Methods and Techniques*. 4th ed. New Delhi: New Age International Publishers; 2019.
2. Kumar R. *Research Methodology: A Step-by-Step Guide for Beginners*. 5th ed. London: SAGE Publications; 2019.
3. Creswell JW, Creswell JD. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 6th ed. Thousand Oaks: SAGE Publications; 2023.
4. Bonita R, Beaglehole R, Kjellström T. *Basic Epidemiology*. 2nd ed. Geneva: World Health Organization; 2006.
5. Gerstman BB. *Basic Biostatistics: Statistics for Public Health Practice*. 2nd ed. Burlington (MA): Jones & Bartlett Learning; 2014.
6. Field A. *Discovering Statistics Using IBM SPSS Statistics*. 5th ed. London: SAGE Publications; 2018.
7. Polit DF, Beck CT. *Nursing Research: Generating and Assessing Evidence for Nursing Practice*. 11th ed. Philadelphia: Wolters Kluwer; 2021.