
Placement: 1st Year

Hours of Instruction

Theory	150 Hours
Practical	100 Hours
Total	250 Hours

Part-A: Nursing Research

Theory	100 Hours
Practical	50 Hours
Total	150 Hours

Course Description:

The course is designed to assist the students to acquire an understanding of the research methodology and statistical methods as a basis for identifying research problem, planning and implementing a research plan. It will further enable the students to evaluate research studies and utilize research findings to improve quality of nursing practice, education and management.

General Objectives:

At the end of the course, the students will be able to:

1. Define basic research terms and concepts and ethics in Nursing Research.
2. Review literature utilizing various sources.
3. Describe the various research approaches and designs.
4. Formulate problem statement.
5. Develop theoretical / conceptual frame work.
6. Use appropriate sampling methods.
7. Discuss various tools and techniques.
8. Validate the tool.
9. Conduct a research study.
10. Draw conclusions of the study.
11. Communicate research findings.
12. Utilize research findings
13. Critically evaluate nursing research studies.
14. Write scientific paper for publication.

CONTENT OUTLINE:

Units	Hours		Content
	Theory	Practical	
I	10		INTRODUCTION: <ul style="list-style-type: none"> ● Methods of acquiring knowledge – problem solving and scientific method. ● Research – Definition, characteristics, purposes, kinds of research ● Historical Evolution of research in nursing ● Basic research terms ● Scope of nursing research: areas, problems in nursing, health and social research ● Concept of evidence based practice ● Ethics in research ● Overview of Research process
II	5	5	REVIEW OF LITERATURE: <ul style="list-style-type: none"> ● Importance, purposes, sources, criteria for selection of resources and steps in reviewing literature.
III	12		Research Approaches and designs <ul style="list-style-type: none"> ● Type: Quantitative and Qualitative ● Historical, survey and experimental –Characteristics, types advantages and disadvantages ● Qualitative: Phenomenology, grounded theory, ethnography.
IV	10	5	RESEARCH PROBLEM: <ul style="list-style-type: none"> ● Identification of research problem ● Formulation of problem statement and research objectives ● Definition of terms ● Assumptions and delimitations ● Identification of variables ● Hypothesis – definition, formulation and types.
V	20		DEVELOPING THEORETICAL/CONCEPTUAL FRAMEWORK: <ul style="list-style-type: none"> ● Theories: Nature, characteristics, Purpose and uses ● Using, testing and developing conceptual framework, models and theories.
VI	6		SAMPLING: <ul style="list-style-type: none"> ● Population and sample. ● Factors influencing sampling. ● Sampling techniques. ● Sample size. ● Probability and sampling error. ● Problems of sampling. ● Characteristics of a good sampling design.
VII	20	10	TOOLS AND METHODS OF DATA COLLECTION: <ul style="list-style-type: none"> ● Concepts of data collection ● Data sources, methods/techniques quantitative and qualitative. ● Tools for data collection – types, characteristics and their development ● Item analysis ● Validity and reliability of tools

			<ul style="list-style-type: none"> ● Pilot study ● Procedure for data collection
VIII	5		IMPLEMENTING RESEARCH PLAN: Research plan (design)., planning for data collection, administration of tool/interventions, collection of data
IX	10	10	ANALYSIS AND INTERPRETATION OF DATA: <ul style="list-style-type: none"> ● Plan for data analysis: quantitative and qualitative ● Preparing data for computer analysis and presentation. ● Statistical analysis ● Interpretation of data ● Conclusion and generalizations ● Summary and discussion
X	10		REPORTING AND UTILIZING RESEARCH FINDINGS: <ul style="list-style-type: none"> ● Communication of research results; oral and written ● Writing research report purposes, methods and style vancouver, ● American Psychological Association(APA), Campbell etc ● Writing scientific articles for publication: purposes & ● Style. ● Utilization of research findings.
XI	3	8	Critical analysis of research reports and articles.
XII	4	7	Developing and presenting a research proposal.

Part –B: Statistics

Hours of Instruction

Theory	50 Hours
Practical	50 Hours
Total	100 Hours

Course Description:

At the end of the course, the students will be able to develop an understanding of the statistical methods and apply them in conducting research studies in nursing.

GENERAL OBJECTIVES:

At the end of the course the students will be able to:

1. Discuss the basic concepts and scope of statistics related to health and Nursing.
2. Organize tabulate and present data meaningfully.
3. Use descriptive statistics to analyze the data.
4. Describe the probable methods to predict and interpret results.
5. Use various inferential statistical methods to predict and interpret results
6. Draw conclusions of the study and predict statistical significance of the results.
7. Establish reliability and scoring methods of the tool developed.
8. Describe vital health statistics and their use in health related research.
9. Explain the basic concepts related to statistics.
10. Use statistical packages by use of computers for data analysis

CONTENT OUTLINE:

Units	Hours		Content
	Theory	Practical	
I	7	4	INTRODUCTION: <ul style="list-style-type: none"> ● Concepts, types, significance and scope of statistics, meaning of data, ● Sample, parameter ● Type and levels of data and their measurement ● Organization and presentation of data – Tabulation of data; ● Frequency distribution ● Graphical and tabular presentations.
II	4	4	MEASURES OF CENTRAL TENDENCY: <ul style="list-style-type: none"> ● Mean, Median, Mode
III	4	5	MEASURES OF VARIABILITY: <ul style="list-style-type: none"> ● Range, Percentiles, average deviation, quartile deviation, standard deviation
IV	3	2	NORMAL DISTRIBUTION: <ul style="list-style-type: none"> ● Probability, characteristics and application of normal probability curve; sampling error.
V	6	8	MEASURES OF RELATIONSHIP: <ul style="list-style-type: none"> ● Correlation – need and meaning ● Rank order correlation; ● Scatter diagram method ● Product moment correlation ● Simple linear⁴regression analysis and prediction.

VI	5	2	Designs and meaning: <ul style="list-style-type: none"> ● Experimental designs ● Comparison in pairs, randomized block design, Latin squares.
VII	8	10	SIGNIFICANCE OF STATISTIC AND SIGNIFICANCE OF DIFFERENCE BETWEEN TWO STATISTICS (TESTING HYPOTHESIS): <ul style="list-style-type: none"> ● Non parametric test – Chi-square test, Sign, median test, ● Mann Whitney test. ● Parametric test – ‘t’ test, ANOVA, MANOVA, ANCOVA. ● Advantage & disadvantages of non-parametric tests before Chi-square test. ● Mann Whitney’s “U” test ● Mc nemer test, Fisher’s exact probability test.
VIII	5	5	USE OF STATISTICAL METHODS IN PSYCHOLOGY AND EDUCATION: <ul style="list-style-type: none"> ● Scaling – Z Score, Z Scaling ● Standard Score and T Score ● Reliability of test Scores: test-retest method, parallel forms, split half method.
IX	4	2	APPLICATION OF STATISTICS IN HEALTH: <ul style="list-style-type: none"> ● Vital & health statistics. ● Ratios, Rates, Trends ● Vital health statistics – Birth and death rates. ● Measures related to fertility, morbidity and mortality.
X	4	8	USE OF COMPUTERS FOR DATA ANALYSIS: <ul style="list-style-type: none"> ● Use of statistical package. ● Use of computers in research.