NURSING RESEARCH AND STATISTICS

PLACEMENT: VII SEMESTER

THEORY: 2 Credits (40 hours)

PRACTICUM: Lab/Skill Lab: 1 Credit (40 hours) Clinical Project: 40 hours

DESCRIPTION: The Course is designed to enable students to develop an understanding of basic concepts of research, research process and statistics. It is further, structured to conduct/ participate in need-based research studies in various settings and utilize the research findings to provide quality nursing care. The hours for practical will be utilized for conducting individual/group research project.

COMPETENCIES: On completion of the course, students will be competent to

1. Identify research priority areas
2. Formulate research questions/problem statement/hypotheses
3. Review related literature on selected research problem and prepare annotated bibliography
4. Prepare sample data collection tool
5. Analyze and interpret the given data
6. Practice computing, descriptive statistics and correlation
7. Draw figures and types of graphs on given select data
8. Develop a research proposal
9. Plan and conduct a group/individual research project

COURSE OUTLINE

T – Theory, P – Practicum

Unit	Time (Hrs.)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
I	6		Describe the concept of research, terms, need and areas of research in nursing Explain the steps of research process State the purposes and steps of Evidence Based Practice	**Research and Research Process** • Introduction and need for nursing research • Definition of Research & nursing research • Steps of scientific method • Characteristics of good research • Steps of Research process – overview • Evidence Based Practice – Concept, Meaning, Purposes, Steps of EBP Process and Barriers	• Lecture cum Discussion • Narrate steps of research process followed from examples of published studies • Identify research priorities on a given area/ specialty • List examples of Evidence Based Practice	• Short answer • Objective type
II	2	8	Identify and state the research problem and objectives	**Research Problem/Question** • Identification of problem area • Problem statement • Criteria of a good research problem • Writing objectives and hypotheses	• Lecture cum Discussion • Exercise on writing statement of problem and objectives	• Short answer • Objective type • Formulation of research questions/ objectives/ hypothesis
III	2	6	Review the related literature	**Review of Literature** • Location • Sources • On line search; CINHAL, COCHRANE etc. • Purposes • Method of review	• Lecture cum Discussion • Exercise on reviewing one research report/ article for a selected research problem • Prepare annotated Bibliography	• Short answer • Objective type • Assessment of review of literature on given topic presented
IV	4	1	Describe the Research approaches and designs	**Research Approaches and Designs** • Historical, survey and experimental • Qualitative and Quantitative designs	• Lecture cum Discussion • Identify types of research approaches used from examples of published and unpublished research • Studies with rationale	• Short answer • Objective type

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V	6	6	Explain the Sampling process Describe the methods of data collection	**Sampling and data Collection** • Definition of Population, Sample • Sampling criteria, factors influencing sampling process, types of sampling techniques • Data – why, what, from whom, when and where to collect • Data collection methodsand instruments o Methods of data collection o Questioning, interviewing o Observations, record analysis and measurement o Types of instruments, Validity & Reliability of the Instrument • Research ethics • Pilot study • Data collection procedure	• Lecture cum Discussion • Reading assignment on examples of data collection tools • Preparation of sample data collection tool • Conduct group research project	• Short answer • Objective type • Developing questionnaire/ Interview Schedule/ Checklist
VI	4	6	Analyze, Interpret and summarize the research data	**Analysis of data** • Compilation, Tabulation, classification, summarization, presentation, interpretation of data	• Lecture cum Discussion • Preparation of sample tables	• Short answer • Objective type • Analyze and interpret given data
VII	12	8	Explain the use of statistics, scales of measurement and graphical presentation of data Describe the measures of central tendency and variability and methods of Correlation	**Introduction to Statistics** • Definition, use of statistics, scales of measurement. • Frequency distribution and graphical presentation of data • Mean, Median, Mode, Standard deviation • Normal Probability and tests of significance • Co-efficient of correlation • Statistical packages and its application	• Lecture cum Discussion Practice on graphical presentations • Practice on computation of measures of central tendency, variability & correlation	• Short answer • Objective type • Computation of descriptive statistics

Unit	Time (Hrs.)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
VIII	4	5 40 Hrs (Clinical Project)	Communicate and utilize the research findings	**Communication and utilization of Research** • Communication of research findings • Verbal report • Writing research report • Writing scientific article/paper • Critical review of published research including publication ethics • Utilization of research findings • Conducting group research project	• Lecture cum Discussion • Read/ Presentations of a sample published/ unpublished research report • Plan, conduct and Write individual/group research project	• Short answer • Objective type • Oral Presentation • Development of research proposal • Assessment of research Project