1.Course Name:
Nursing Research Methods
2.Course Code:
WNR-31-02
3.Semester / Year:
Third Stage/First Semester
4.Description Preparation Date:
1/10/2024
5.Available Attendance Forms:
In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
2 Theoretical (Per Week), Number of Credits (5)
7.Course administrator's name (mention all, if more than one name)
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8.Course Objectives: By the end of this course, students should be able to:

By the end of the course, students will:

- Define: key research terminology (e.g., hypothesis, variables, sampling, reliability/validity).

- Explain the steps of the research process: (problem identification, literature review, design, data collection, analysis, dissemination).

- Compare quantitative, qualitative, and mixed-methods research approaches.

- Describe ethical principles in nursing research

- Identify common research designs (e.g., cohort studies, phenomenology, grounded theory).

- Recognize the role of evidence-based practice (EBP) in translating research to clinical settings.

Assessment Methods

- **Exams**: MCQ/short answer on research concepts.

- **Assignments**: Literature review, PICOT question development.

	- **Presentation**: Research proposal defense. - **Participation**: Ethical case study discussions.
	By the end of the course, students will: - Formulate a research question/PICOT question aligned with nursing practice gaps. - Conduct a systematic literature search using databases. - Design a simple research proposal (including methodology, sampling, and data collection tools). - Apply basic statistical concepts (descriptive/inferential statistics) to interpret research findings. - Critically appraise published nursing research for validity, reliability, and applicability. - Use reference management tools (e.g., EndNote, Zotero) to organize scholarly sources.
	- Value research as a tool for improving patient outcomes and nursing practice. - Uphold ethical standards in research (e.g., confidentiality, honesty in data reporting). - Appreciate cultural sensitivity when conducting research with diverse populations. - Collaborate with peers/mentors to critique and refine research ideas. - Advocate for evidence-based policies in healthcare settings.

9.Teaching and Learning Strategies

Strategy	Lectures on research fundamentals. - Workshops: Database searches. - Group projects: Develop/present a mini-research proposal.

10.Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	2	- Define key **scientific research terminology** (e.g., hypothesis, variables, reliability, validity, bias). - Explain the **importance of research** in advancing knowledge and evidence-based practice. - Describe the **scientific method** and its steps (observation, hypothesis, experimentation, analysis, conclusion).	Introduction to scientific research	- Lectures. - seminars.	Quizzes on research terminology and ethics
2	2	- Accurately define fundamental research terminology, including: ○ **Hypothesis** (testable prediction) ○ **Variables** (independent, dependent, confounding) ○ **Population** vs. **Sample** ○ **Reliability** (consistency) and **Validity** (accuracy) ○ **Bias** (selection bias, recall bias) **2. Classify Research Types** - Differentiate between: ○ **Quantitative** (numerical data) vs. **Qualitative** (descriptive data) research ○ **Experimental** (RCTs) vs. **Observational** (cohort, case-control) studies ○ **Primary** (original data) vs. **Secondary** (existing data) research **3. Understand Research Design Components** - Describe the purpose of: ○ **Control groups** (comparison baseline) ○ **Randomization** (reducing bias)	Basic Terminology in Research	- Lectures. - seminars.	**Matching quizzes** (term definitions)

		o **Blinding** (single-blind/double-blind studies) **4. Identify Data Collection Methods** • Match terms to techniques: o **Surveys** (questionnaires) o **Interviews** (structured/semi-structured) o **Focus groups** (qualitative discussions) o **Systematic reviews** (evidence synthesis)			
3	2	**Define and Identify a Research Problem** • Explain what constitutes a **research problem** in scientific inquiry. • Differentiate between a **research problem** and a **research topic**. • Recognize the characteristics of a well-defined research problem (clear, relevant, feasible). **2. Sources of Research Problems** • Identify common sources of research problems, such as: o Gaps in existing literature o Contradictions in prior studies o Practical issues in professional settings o Emerging trends or societal needs **3. Formulate a Research Problem Statement** • Write a concise **problem statement** that:	**Research Problem**	- Lectures. - seminars.	• **Assignment**: Draft a problem statement + research questions for a chosen topic.

		o Highlights the significance of the problem o Specifies the context (population, setting) o Justifies the need for investigation			
4	2	**Define and Differentiate Types of Research Questions** • Explain what constitutes a **research question** and its role in guiding a study. • Compare **qualitative** (exploratory, "how/why") and **quantitative** (measurable, "what/relationship") research questions. • Distinguish between **descriptive**, **comparative**, and **relationship-based** questions. **2. Formulate Clear and Focused Research Questions:** Use the PICOT framework (Population, Intervention, Comparison, Outcome, Time) for clinical/research questions. **3. Link Questions to Hypotheses (**Quantitative Focus)	**Research Questions**	- Lectures. - seminars.	• **Assignment**: Submit a research proposal with 3-5 key questions + rationale.
5	**Mid-term exam. No 1**				
7+6		**Define and Differentiate Hypothesis Types** • Explain the **purpose of a hypothesis** in scientific research. • Compare **null (H₀)** and **alternative (H₁)** hypotheses. • Distinguish between: o **Directional** (one-tailed) vs. **non-**	**Hypothesis Types**	- Lectures. - seminars.	**Exercise**: Convert 5 research questions into null/alternative hypotheses. **Peer Review**: Swap and

		directional (two-tailed) hypotheses
		o **Simple** (one variable) vs. **complex** (multiple variables) hypotheses
		
		2. Formulate Testable Hypotheses
		• Construct hypotheses that are:
		  o **Clear**: Unambiguous variables and relationships
		  o **Measurable**: Operationally defined terms
		  o **Falsifiable**: Capable of being disproven
		• Apply the **"If...then..."** format for experimental hypotheses.
		
		3. Align Hypotheses with Research Questions
		• Derive hypotheses from well-structured research questions.
		• Ensure consistency between hypotheses and **study design** (e.g., correlational vs. experimental).
		
		4. Apply in Real Research Scenarios
					evaluate hypotheses using a checklist.

8		**Define and Classify Research Designs** • Explain the **purpose of research design** in structuring a study. • Compare major types: o **Experimental**	**Research Designs**	- Lectures. - seminars.	• **Design Proposal**: Submit a structured research plan.

		o **Observational** o **Qualitative** o **Mixed-methods** **2. Select an Appropriate Design** • Match research designs to: o **Study objectives** (e.g., exploration, description, causation) o **Research questions/hypotheses** o **Practical constraints** (time, resources, ethics) • Justify design choices based on strengths/limitations (e.g., internal vs. external validity).			• **Case Study Analysis**: Identify design strengths/ weaknesses in published papers.
9	Mid-term exam. No 2				
10		**Define Key Sampling Concepts** • Explain the **purpose of sampling** in research. • Differentiate between **population**, **sample**, and **sampling frame**. • Define terms: **representativeness, sampling error**, and **sampling bias**. **2. Compare Sampling Techniques** • **Probability Sampling**: o Simple random o Stratified o Cluster o Systematic • **Non-Probability Sampling**: o Convenience o Purposive o Snowball o Quota	**Sampling Concepts**	- Lectures. - seminars.	• **Sampling Plan Assignment**: Develop sampling strategy for a case study. • **Calculation Exercises**: Determine sample sizes for various scenarios.

		3. Select Appropriate Sampling Methods
		• Choose sampling strategies based on:
		    o Research objectives (exploratory vs. confirmatory)
		    o Population characteristics (homogeneous vs. heterogeneous)
		    o Resource constraints (time, budget, accessibility)			

12+11		**Understand Data Collection Fundamentals** • Define **data collection** and its role in the research process. • Differentiate between **primary** (first-hand) and **secondary** (existing) data sources. • Explain the importance of **reliability** and **validity** in data collection. **2. Compare Major Data Collection Methods** **Quantitative Methods** • Surveys & Questionnaires: • Experiments: • Observational Studies **Qualitative Methods** • Interviews: • Focus Groups. • Document Analysis: • Select Appropriate Methods • Match data collection methods to: • Research questions • Study design	**Data Collection**	- Lectures. - seminars.	**Tool Design**: Draft a questionnaire/interview guide. **Role-Play**: Conduct mock interviews/focus group

		• Practical constraints. **3. Develop Data Collection Tools** • Design effective instruments: • Questionnaires (avoid leading/double-barreled questions). • Interview/focus group guides. • Observation protocols. • Pilot-test tools to refine clarity and usability.			

13+14		**Understand the Purpose and Structure of a Research Proposal**
		 • Explain the **role of a research proposal** (e.g., securing approval, funding, or ethical clearance).
		 • Identify **key components**:
		  ○ Title
		  ○ Abstract/Summary
		  ○ Introduction/Background
		  ○ Literature Review
		  ○ Research Questions/Hypotheses
		  ○ Methodology
		  ○ Ethical Considerations
		  ○ Timeline/Budget (if applicable)
		  ○ References
		 2. Develop a Compelling Introduction
		 • Articulate the **research problem** and its significance.
		 • Provide **context** (theoretical, practical, or policy relevance).
		 • State clear **objectives** and **research questions/hypotheses**.
			Research Proposal	- Lectures.
				 - seminars.
					• **Proposal Draft**: Submit a complete research proposal.
					 • **Peer Review**: Evaluate classmates' proposals using a rubric.
					 • **Oral Defense**: Present and justify the proposal (simulated or real).

| | | 13. **Conduct and Synthesize a Literature Review**
• Summarize **key studies** related to the topic.
• Identify **gaps in knowledge** that the study will address.
• Organize content **thematically** or **chron ologically**.
14. **Design a Rigorous Methodology**
• Select appropriate **research design** (quantitative, qualitative, or mixed-methods).
• Describe **participant selection** (sampling strategy, inclusion/exclusion criteria).
• Outline **data collection methods** (surveys, interviews, experiments).
• Explain **data analysis plans** (statistical tests, qualitative coding).
15. **Address Ethical and Practical Considerations**
• Discuss **informed consent**, **confidentiality**, and **risk management**. | | | |

11.Course Evaluation

Evaluation				Score standard
Formative		**Summative**		-Excellent (90-100)
Scores	**Evaluation methods**	**Scores**	**Evaluation methods**	-Very Good (80-less than 90)
4%	Daily Quizzes	10%	First-Mid-term theoretical exam	
2%	Seminars	10%	Second-midterm exam	
2%	Reports			-Good (70-less than 80)
2%	Participation	70%	Final theoretical exam	-Fair (60-less than 70)

				-Acceptable (50- less than 60) - Fail (less than 50)
10%		90%		

12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	**Nursing Research: Generating and Assessing Evidence for Nursing Practice"** (11th Ed.) *Polit & Beck* **Focus**: Comprehensive guide to quantitative/qualitative research methods. **Strengths**: Clear examples, step-by-step SPSS tutorials, critical appraisal tools. **"Evidence-Based Practice in Nursing & Healthcare"** (4th Ed.) *Melnyk & Fineout-Overholt* **Focus**: Translating research into clinical practice. **Strengths**: EBP models, case studies, implementation strategies. **The Research Process in Nursing"** (7th Ed.) *Gerrish & Lathlean* **Focus**: UK/EU perspective with global relevance. **Strengths**: Mixed-methods focus, ethics, real-world case studies.
Electronic References, Websites	- https://www.osmosis.org/learn/The_research_process:_Nursing - https://nursingeducation.org/insights/importance-of-research/#:~:text=The%20Process%20of%20Nursing%20Research%20Nursing%20research,it's%20important%20to%20understand%20its%20key%20components. - https://www.ncbi.nlm.nih.gov/books/NBK218540/

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