

Course Description
Nursing Research Methods
(2025-2026)

1.Course Name:	
Nursing Research Methods	
2.Course Code:	
WNR-31-02	
3.Semester / Year:	
Third Stage / First Semester	
4.Description Preparation Date:	
21/9/2025	
5.Available Attendance Forms:	
In-person lectures	
6.Number of Credit Hours (Total) / Number of Units (Total)	
2 Theoretical (Per Week), Number of Credits (2)	
7.Course administrator's name (mention all, if more than one name)	
Name: Assist. Prof. Dr. Dhafer Ameen Jabbar Al-Mossawy Email: dhafer.ameen@uowa.edu.iq	
8.Course Objectives: By the end of this course, students should be able to:	
Knowledge (Cognitive Domain)	By the end of the course, students will: - Define: key research terminology (e.g., hypothesis, variables, sampling, and 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, and 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.
Skills (Psychomotor Domain)	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.
Values (Affective Domain)	- 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.
1. Teaching and Learning Strategies	
Strategy	Lectures on research fundamentals.

	- Workshops: Database searches. - Group projects: Develop/present a mini-research proposal.				
2. 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) ○ Blinding (single-blind/double-blind studies) 4. Identify Data Collection Methods ● Match terms to techniques: ○ Surveys (questionnaires) ○ Interviews (structured/semi-structured)	Basic Terminology in Research	- Lectures. - seminars.	● Matching quizzes (term definitions)

		○ Focus groups (qualitative discussions) ○ 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: ○ Gaps in existing literature ○ Contradictions in prior studies ○ Practical issues in professional settings ○ Emerging trends or societal needs 3. Formulate a Research Problem Statement • Write a concise problem statement that: ○ Highlights the significance of the problem ○ Specifies the context (population, setting) ○ Justifies the need for investigation	Research Problem	- Lectures. - seminars.	• Assignment: Draft a problem statement + research questions for a chosen topic.
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				

6+7		Define and Differentiate Hypothesis Types • Explain the purpose of a hypothesis in scientific research. • Compare null (H_0) and alternative (H_1) hypotheses. • Distinguish between: ◦ Directional (one-tailed) vs. non-directional (two-tailed) hypotheses ◦ Simple (one variable) vs. complex (multiple variables) hypotheses 2. Formulate Testable Hypotheses • Construct hypotheses that are: ◦ Clear: Unambiguous variables and relationships ◦ Measurable: Operationally defined terms ◦ 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	Hypothesis Types	- Lectures. - seminars .	Exercise: Convert 5 research questions into null/alternative hypotheses. Peer Review: Swap and evaluate hypotheses using a checklist.
8		Define and Classify Research Designs • Explain the purpose of research design in structuring a study. • Compare major types: ◦ Experimental ◦ Observational ◦ Qualitative ◦ Mixed-methods 2. Select an Appropriate Design • Match research designs to:	Research Designs	- Lectures. - seminars .	• Design Proposal: Submit a structured research plan. • Case Study Analysis:

		○ Study objectives (e.g., exploration, description, causation) ○ Research questions/hypotheses ○ Practical constraints (time, resources, ethics) ● Justify design choices based on strengths/limitations (e.g., internal vs. external validity).			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: ○ Simple random ○ Stratified ○ Cluster ○ Systematic ● Non-Probability Sampling: ○ Convenience ○ Purposive ○ Snowball ○ Quota 3. Select Appropriate Sampling Methods ● Choose sampling strategies based on: ○ Research objectives (exploratory vs. confirmatory) ○ Population characteristics (homogeneous vs. heterogeneous) ○ Resource constraints (time, budget, accessibility)	Sampling Concepts	- Lectures. - seminars .	● Sampling Plan Assignment: Develop sampling strategy for a case study. ● Calculation Exercises: Determine sample sizes for various scenarios.
11+12		Understand Data Collection Fundamentals	Data Collection	- Lectures.	Tool Design:

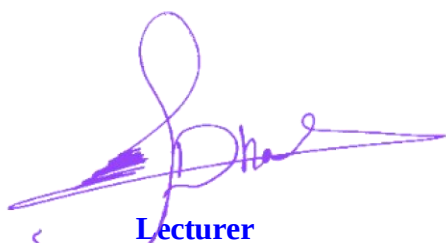
		- Define data collection and its role in the research process. - Differentiate between primary (first-hand) and secondary (existing) data sources. - Explain the importance of reliability and validity in data collection. 2. Compare Major Data Collection Methods Quantitative Methods - Surveys & Questionnaires: - Experiments: - Observational Studies Qualitative Methods - Interviews: - Focus Groups. - Document Analysis: - Select Appropriate Methods - Match data collection methods to: - Research questions - Study design - 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.		- seminars .	Draft a questionnaire/interview guide. Role-Play: Conduct mock interviews/focus group
14+13		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	Research Proposal	- Lectures. - seminars.	Proposal Draft: Submit a complete research proposal. Peer Review: Evaluate classmate

		○ 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. 3. Conduct and Synthesize a Literature Review • Summarize key studies related to the topic. • Identify gaps in knowledge that the study will address. 4. 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). 5. Address Ethical and Practical Considerations • Discuss informed consent, confidentiality, and risk management.			s' proposals using a rubric. • Oral Defense: Present and justify the proposal (simulated or real).
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6. Course Evaluation

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

				-Acceptable (50-less than 60) - Fail (less than 50)
10%		90%		
7. Learning and Teaching Resources				
Required textbooks (curricular books, if any)	• Nursing Research: Generating and Assessing Evidence for Nursing Practice" (11th Ed.) • <i>Polit & Beck</i> ✓ 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.) ✓ <i>Melnyk & Fineout-Overholt</i> ✓ Focus: Translating research into clinical practice. ✓ Strengths: EBP models, case studies, implementation strategies. • The Research Process in Nursing" (7th Ed.) • <i>Gerrish & Lathlean</i> • 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/			



Lecturer

Assist. Prof. Dr. Dhafer Ameen J. Al-Mossawy



Head of Department

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