1.Course Name:	
Nursing Research Methods	
2.Course Code:	
WNR-31-02	
3.Semester / Year:	
Third Stage/First Semester	
4.Description Preparation Date:	
21/09/2025	
5.Available Attendance Forms:	
In-person lectures	
6.Number of Credit Hours (Total) / Number of Units (Total)	
2 Theoretical (Per Week), Number of Credits (5)	
7.Course administrator's name (mention all, if more than one name)	
Name: **Assist. Prof. Dr. Dhafer Ameen J. 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, 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.
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: o **Hypothesis** (testable prediction) o **Variables** (independent, dependent, confounding) o **Population** vs. **Sample** o **Reliability** (consistency) and **Validity** (accuracy) o **Bias** (selection bias, recall bias) **2. Classify Research Types** • Differentiate between: o **Quantitative** (numerical data) vs. **Qualitative** (descriptive data) research o **Experimental** (RCTs) vs. **Observational** (cohort, case-control) studies o **Primary** (original data) vs. **Secondary** (existing data) research **3. Understand Research Design Components** • Describe the purpose of: o **Control groups** (comparison baseline) o **Randomization** (reducing bias) 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)	Basic Terminology in Research	- Lectures. - seminars.	• **Matching quizzes** (term definitions)
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:	**Research Problem**	- Lectures. - seminars.	• **Assignment**: Draft a problem statement + research questions for a chosen topic.

		○ 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			
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	**Hypothesis Types**	- Lectures. - seminars.	**Exercise**: Convert 5 research questions into null/alternative 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**			**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: ○ **Study objectives** (e.g., exploration, description, causation) ○ **Research questions/hypotheses** ○ **Practical constraints** (time, resources, ethics)	**Research Designs**	- Lectures. - seminars.	● **Design Proposal**: Submit a structured research plan. ● **Case Study Analysis**: Identify design strengths/weaknesses in published papers.

		• Justify design choices based on strengths/limitations (e.g., internal vs. external validity).			
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 **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)	**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** • Define **data collection** and its role in the research process.	**Data Collection**	- Lectures. - seminars.	**Tool Design**: Draft a questionnaire/interview guide.

		• 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.			**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**: o Title o Abstract/Summary o Introduction/Background o Literature Review o 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).

6. Course Evaluation

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

2%	Reports			-Good (70-less than 80) -Fair (60-less than 70) -Acceptable (50-less than 60) - Fail (less than 50)
2%	Participation	70%	Final theoretical exam	
10%		90%		

7. 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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