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| **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)** |
| Name: Kholoud Hashem Salloum<br>Email: kholoud.ha@uowa.edu.iq |
| **8.Course Objectives:** By the end of this course, students should be able to: |

- 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.

- 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.

| 1. Teaching and Learning Strategies | |
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| **Strategy** | Lectures on research fundamentals.<br>- Workshops: Database searches.<br>- Group projects: Develop/present a mini-research proposal. |

**2. Course Structure**

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

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| | | ○ **Blinding** (single-blind/double-blind studies)<br>**4. Identify Data Collection Methods**<br>• Match terms to techniques:<br>○ **Surveys** (questionnaires)<br>○ **Interviews** (structured/semi-structured)<br>○ **Focus groups** (qualitative discussions)<br>○ **Systematic reviews** (evidence synthesis) | | | |
| 3 | 2 | **Define and Identify a Research Problem**<br>• Explain what constitutes a **research problem** in scientific inquiry.<br>• Differentiate between a **research problem** and a **research topic**.<br>• Recognize the characteristics of a well-defined research problem (clear, relevant, feasible).<br>**2. Sources of Research Problems**<br>• Identify common sources of research problems, such as:<br>○ Gaps in existing literature<br>○ Contradictions in prior studies<br>○ Practical issues in professional settings<br>○ Emerging trends or societal needs<br>**3. Formulate a Research Problem Statement**<br>• Write a concise **problem statement** that:<br>○ Highlights the significance of the problem<br>○ Specifies the context (population, setting)<br>○ Justifies the need for investigation | **Research Problem** | - Lectures.<br>- seminars. | • **Assignment**: Draft a problem statement + research questions for a chosen topic. |
| 4 | 2 | **Define and Differentiate Types of Research Questions**<br>• Explain what constitutes a **research question** and its role in guiding a study.<br>• Compare **qualitative** (exploratory, "how/why")<br>and **quantitative** (measurable, "what/relationship") research questions. | **Research Questions** | - Lectures.<br>- seminars. | • **Assignment**: Submit a research proposal with 3-5 key questions + |

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| | | • Distinguish between **descriptive**, **comparative**, and **relationship-based** questions.<br>**2. Formulate Clear and Focused Research Questions:** Use the PICOT framework (Population, Intervention, Comparison, Outcome, Time) for clinical/research questions.<br>**3. Link Questions to Hypotheses (**Quantitative Focus) | | | rationale. |
| 5 | **Mid-term exam. No 1** | | | | |
| 7+6 | | **Define and Differentiate Hypothesis Types**<br>• Explain the **purpose of a hypothesis** in scientific research.<br>• Compare **null ($H_0$)** and **alternative ($H_1$)** hypotheses.<br>• Distinguish between:<br>  ○ **Directional** (one-tailed) vs. **non-directional** (two-tailed) hypotheses<br>  ○ **Simple** (one variable) vs. **complex** (multiple variables) hypotheses<br>**2. Formulate Testable Hypotheses**<br>• Construct hypotheses that are:<br>  ○ **Clear**: Unambiguous variables and relationships<br>  ○ **Measurable**: Operationally defined terms<br>  ○ **Falsifiable**: Capable of being disproven<br>• Apply the **"If...then..."** format for experimental hypotheses.<br>**3. Align Hypotheses with Research Questions**<br>• Derive hypotheses from well-structured research questions.<br>• Ensure consistency between hypotheses and **study design** (e.g., correlational vs. experimental). | **Hypothesis Types** | - Lectures.<br>- seminars. | **Exercise**: Convert 5 research questions into null/alternative hypotheses.<br>**Peer Review**: Swap and evaluate hypotheses using a checklist. |

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| | | **4. Apply in Real Research Scenarios** | | | |
| 8 | | **Define and Classify Research Designs**<br>• Explain the **purpose of research design** in structuring a study.<br>• Compare major types:<br>o **Experimental**<br>o **Observational**<br>o **Qualitative**<br>o **Mixed-methods**<br>**2. Select an Appropriate Design**<br>• Match research designs to:<br>o **Study objectives** (e.g., exploration, description, causation)<br>o **Research questions/hypotheses**<br>o **Practical constraints** (time, resources, ethics)<br>• Justify design choices based on strengths/limitations (e.g., internal vs. external validity). | **Research Designs** | - Lectures.<br>- seminars.<br> | • **Design Proposal**: Submit a structured research plan.<br>• **Case Study Analysis**: Identify design strengths/weaknesses in published papers. |
| 9 | Mid-term exam. No 2 | | | | |
| 10 | | **Define Key Sampling Concepts**<br>• Explain the **purpose of sampling** in research.<br>• Differentiate between **population**, **sample**, and **sampling frame**.<br>• Define terms: **representativeness**, **sampling error**, and **sampling bias**.<br>**2. Compare Sampling Techniques**<br>• **Probability Sampling**:<br>o Simple random<br>o Stratified<br>o Cluster<br>o Systematic<br>• **Non-Probability Sampling**:<br>o Convenience<br>o Purposive | **Sampling Concepts** | - Lectures.<br>- seminars.<br> | • **Sampling Plan Assignment**: Develop sampling strategy for a case study.<br>• **Calculation Exercises**: Determine sample sizes for various scenarios. |

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| | | ○ Snowball<br>○ Quota<br>**3. Select Appropriate Sampling Methods**<br>• Choose sampling strategies based on:<br>○ Research objectives (exploratory vs. confirmatory)<br>○ Population characteristics (homogeneous vs. heterogeneous)<br>○ Resource constraints (time, budget, accessibility) | | | |
| 12+11 | | **Understand Data Collection Fundamentals**<br>• Define **data collection** and its role in the research process.<br>• Differentiate between **primary** (first-hand) and **secondary** (existing) data sources.<br>• Explain the importance of **reliability** and **validity** in data collection.<br>**2. Compare Major Data Collection Methods**<br>**Quantitative Methods**<br>• Surveys & Questionnaires:<br>• Experiments:<br>• Observational Studies<br>**Qualitative Methods**<br>• Interviews:<br>• Focus Groups.<br>• Document Analysis:<br>• Select Appropriate Methods<br>• Match data collection methods to:<br>• Research questions<br>• Study design<br>• Practical constraints.<br>**3. Develop Data Collection Tools**<br>• Design effective instruments: | **Data Collection** | - Lectures.<br>-<br>seminars<br>. | **Tool Design**: Draft a questionnaire/interview guide.<br>**Role-Play**: Conduct mock interviews/focus group |

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| | | • Questionnaires (avoid leading/double-barreled questions).<br>• Interview/focus group guides.<br>• Observation protocols.<br>• Pilot-test tools to refine clarity and usability. | | | |
| 13+14 | | **Understand the Purpose and Structure of a Research Proposal**<br>• Explain the **role of a research proposal** (e.g., securing approval, funding, or ethical clearance).<br>• Identify **key components**:<br>o Title<br>o Abstract/Summary<br>o Introduction/Background<br>o Literature Review<br>o Research Questions/Hypotheses<br>o Methodology<br>o Ethical Considerations<br>o Timeline/Budget (if applicable)<br>o References<br>**2. Develop a Compelling Introduction**<br>• Articulate the **research problem** and its significance.<br>• Provide **context** (theoretical, practical, or policy relevance).<br>• State clear **objectives** and **research questions/hypotheses**.<br>3. **Conduct and Synthesize a Literature Review**<br>• Summarize **key studies** related to the topic.<br>• Identify **gaps in knowledge** that the study will address.<br>**4. Design a Rigorous Methodology**<br>• Select appropriate **research design** (quantitative, qualitative, or mixed-methods). | **Research Proposal** | - Lectures.<br>- seminars. | • **Proposal Draft**: Submit a complete research proposal.<br>• **Peer Review**: Evaluate classmates' proposals using a rubric.<br>• **Oral Defense**: Present and justify the proposal (simulated or real). |

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| | | • Describe **participant selection** (sampling strategy, inclusion/exclusion criteria).<br>• Outline **data collection methods** (surveys, interviews, experiments).<br>• Explain **data analysis plans** (statistical tests, qualitative coding).<br>**5. Address Ethical and Practical Considerations**<br>• Discuss **informed consent**, **confidentiality**, and **risk management**. | | | |

6. Course Evaluation

| Evaluation | | | | Score standard |
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| **Formative** | | **Summative** | | -Excellent (90-100)<br>-Very Good (80-less than 90)<br>-Good (70-less than 80)<br>-Fair (60-less than 70)<br>-Acceptable (50-less than 60) - Fail (less than 50) |
| **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 | |
| 10% | | 90% | | |

7. Learning and Teaching Resources

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| Required textbooks (curricular books, if any) | • **Nursing Research: Generating and Assessing Evidence for Nursing Practice"** (11th Ed.)<br>• *Polit & Beck*<br>✓ **Focus**: Comprehensive guide to quantitative/qualitative research methods.<br>✓ **Strengths**: Clear examples, step-by-step SPSS tutorials, critical appraisal tools.<br>• **"Evidence-Based Practice in Nursing & Healthcare"** (4th Ed.)<br>✓ *Melnyk & Fineout-Overholt*<br>✓ **Focus**: Translating research into clinical practice.<br>✓ **Strengths**: EBP models, case studies, implementation strategies.<br>**The Research Process in Nursing"** (7th Ed.)<br>• *Gerrish & Lathlean*<br>• **Focus**: UK/EU perspective with global relevance. |

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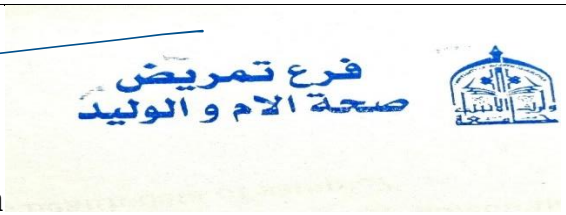
| | • **Strengths**: Mixed-methods focus, ethics, real-world case studies. |
| Electronic References, Websites | - https://www.osmosis.org/learn/The_research_process:_Nursing<br>- https://nursingeducation.org/insights/importance-of-research/#:~:text=The%20Process%20of%20Nursing%20Research%20Nursing%20research,it's%20important%20to%20understand%20its%20key%20components.<br>- https://www.ncbi.nlm.nih.gov/books/NBK218540/ |




**Dr. Kholoud Hashem Salloum**