



Department of Anesthesia

College of MLA

University of Cihan- Sulaymaniyah

Subject: Research Methodology

Course Book – Year 2024-2025

Lecturer's name: Niaz Mustafa Kamal Karim

Academic Year: 2024/2025

Course Book

1. Course name	Research Methodology
2. Lecturer in charge	Niaz Mustafa Kamal Karim
3. Department/ College	Anesthesia
4. Time (in hours) per week	2 hours
5. Office hours	Sunday

6. Course code	AN
7. Teacher's academic profile	https://sites.google.com/spu.edu.iq/niaz-kamal/home
8. Keywords	Research, methodology, case-control, retrospective
9. Course overview:	
<p>Research Methodology is a comprehensive study of the methods and techniques used to conduct research. This course aims to equip students with the necessary skills to systematically design, conduct, and analyze research projects. It focuses on qualitative and quantitative research methods, data collection techniques, analysis, interpretation, and how to effectively present research findings.</p> <p>Studying research methodology is essential not only for academic success but also for personal and professional development. It equips students with critical skills to think critically, conduct independent research, communicate effectively, and make informed decisions. These abilities are precious in both academic and workplace environments, making research methodology a fundamental subject for students across all fields.</p>	
10. Course objective:	
<p>By the end of the course, students will be able to:</p> <ol style="list-style-type: none"> 1. Understand the fundamental concepts of research, its importance, and its application across various disciplines. 2. Formulate research problems, objectives, and questions. 3. Develop literature reviews, identify gaps, and design appropriate methodologies. 4. Differentiate between qualitative, quantitative, and mixed-method research. 5. Master techniques for data collection, including surveys, interviews, observations, and experiments. 6. Use statistical tools for data analysis and interpret research findings. 7. Write and present research proposals and reports effectively. 8. Critically evaluate existing research studies for their methodology and conclusions. 	
12. Forms of teaching	
<ol style="list-style-type: none"> 1- Visual materials: data show, PowerPoint presentations, and whiteboard. 2. Upload lectures to Google Classroom for students before starting the class. 3. Group discussion and activities. 4. Students were divided into groups of four, with each group preparing a seminar on research techniques, design, and methodology, which was then presented in class via PowerPoint at the end of the lecture. Each group had 15 minutes for presentation and discussion. 	

13. Assessment scheme

Midterm Grade distributions will be as follows:

Theory: 40 Marks (10 Marks on quizzes and seminar)

Final Grade distributions will be as follows:

Theory: 50 marks on paper exam

14. Student learning outcome:

Students will be able to: Upon successful completion of the course, students will be able to:

- 1- **Understand Fundamental Research Concepts**
Demonstrate a clear understanding of the foundational concepts of research, including the different types of research (qualitative, quantitative, and mixed methods) and their significance in solving real-world problems.
- 2- **Formulate Research Problems and Hypotheses**
Develop a well-defined research problem, articulate research questions or hypotheses, and set clear objectives.
- 3- **Conduct a Comprehensive Literature Review**
Search, evaluate, and synthesize relevant academic literature, identifying gaps and establishing the context for their research study.
- 4- **Design Research Projects**
Choose and justify appropriate research designs and methodologies (e.g., surveys, experiments, case studies) that align with the research objectives.
- 5- **Apply Sampling Techniques**
Identify and implement appropriate sampling strategies, ensuring that the sample is representative of the population being studied and minimizing sampling errors.
- 6- **Collect and Analyze Data**
Use appropriate data collection methods (surveys, interviews, observations, etc.) and apply relevant data analysis techniques for both qualitative and quantitative data.
- 7- **Evaluate Research Ethics**
Recognize and apply ethical considerations in research, including obtaining informed consent, ensuring confidentiality, and addressing bias.
- 8- **Prepare and Present Research Reports**
Effectively write research proposals and reports, presenting research findings in a clear and structured format with well-organized conclusions and recommendations.
- 9- **Critically Evaluate Research Studies**
Develop the ability to critically assess the validity and reliability of research methodologies and findings from other studies and reflect on how these insights can improve their research practice.
- 10- **Demonstrate Problem-Solving Skills**
Apply critical thinking and problem-solving skills throughout the research process, from formulating questions to drawing actionable conclusions from data.

15. Course Reading List and References:

- 1- Research-Methodology.net
- 2- UNC Writing Center - Research Methodologies
- 3- Simply Psychology – Research Method
- 4- SAGE Research Methods

16. The Topics:

Theory Lectures and Topics	
1-	Introduction to research methodology
2-	Primary and secondary study
3-	Prospective and retrospective study
4-	Construction of the research
5-	Research Problem Identification
6-	Literature Review
7-	Research Design
8-	Design of the questionnaire
9-	Sampling Techniques
10-	Data Collection Methods
11-	Data Analysis Techniques

12-	Advanced Topics in Research Methodology
13-	Ethics in research
14-	Research ethics consideration
15-	Writing and Presenting a Research Report

Final Examination
Exam Sample (For Training Purposes only)

Q1/ Write (F) for the false sentences, (T) for the proper sentences, correct the false one

- 1- The case-control study used for identifying risk factor
- 2- Aims and objectives have similar meaning

Q2/ Choose the most correct answer for the following sentences

- 1- A prevalence study includes
A- RCT B- NRTC C- case-control D- cross-sectional E- None of them

- 2- The study that the author conducted in the first time is called
A- Secondary study B- primary study C- qualitative study D- retrospective study
E- all of them

Q3- Define the following terms:

Research

Sampling technique

Q4- Enumerate the following:

- 1- Types of the study design
- 2- Structure for writing a research paper

Q5/ Enumerate the difference between the pros and cons of a case-control study

Q6/ Complete the sentences with the correct answer

- 1- The title of the research should be,, and
- 2- is reading of the other research before conducting the research title

17. Peer review

Certify that:

- 1- I read and verify all requirements of teaching quality assurance are respected in this course book.
- 2- The scientific contents are new, convenient, and well-organized for this stage.
- 3- The order of chapters is well done.
- 4- References are new and available for students.

That's why I signed up for this course book, and I take on all responsibilities.

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College: Science

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Signature:

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