



**Department of Medical Laboratory**

**Erbil Technical Health and Medical College**

**Erbil Polytechnic University**

**Subject: Research Methodology**

**Course Book – Undergraduate (BSc)**

**Lecturer's name: Hayman Kakakhan Awla, PhD**

**Academic Year: 2023/2024**

### Course Book

<b>1. Course name</b>	<b>Research Methodology</b>
<b>2. Lecturer in charge</b>	<b>Assist. Prof. Dr. Hayman Kakakhan Awla</b>
<b>3. Department/ College</b>	<b>Department of Medical Laboratory Erbil Technical Health and Medical College</b>
<b>4. Contact</b>	<b>07504463581</b>
<b>5. Time (in hours) per week</b>	<b>Theory: 1</b>
<b>6. Office hours</b>	<b>Availability of the lecturer to the student during the week</b>
<b>7. Course code</b>	
<b>8. Teacher's academic profile</b>	<p>I obtained a Bachelor of Science (BSc) degree from the Faculty of Agriculture, in the Plant Protection Department, at Salahaddin University in Erbil, Iraq, in July 2003. Following this, I pursued a Master of Science (MSc) degree at the same institution, specializing in Plant Pathology, and completed it in January 2008. During my academic journey, I worked as a lecturer in the Agriculture College at Salahaddin University and head of department at Erbil polytechnic university for a period of 4 years.</p> <p>In May 2016, I received my Doctor of Philosophy (PhD) from the Faculty of Agriculture, specifically from the Plant Protection Department at the University Putra Malaysia (UPM).</p> <p>Throughout my career, I have made significant contributions, including the publication of 24 journal articles in international journals, obtaining 2 patents, receiving 2 gold medals and one bronze medal, participating in research projects, contributing to seminar proceedings, and conducting workshops.</p>
<b>9. Keywords</b>	Research methodology, thesis, manuscript, writing and publishing
<b>10. Course overview:</b>	
<b>11. Course objective:</b>	
<ul style="list-style-type: none"> <li>-Understand basic terminology and fundamental concepts in research</li> <li>- Write research proposal for selected problem definition</li> <li>- Define research methodology for selected problems</li> <li>- Analyse the various types of research designs and select appropriate design for experimentation</li> <li>- Provide guidelines about contents and body of research papers, reports, and thesis</li> <li>- Create awareness about various citation index, databases, and search engines</li> <li>- Apply various techniques of avoiding plagiarism to ensure ethical and integral writing</li> </ul>	

**12. Student's obligation****13. Forms of teaching****14. Assessment scheme**

Report	
Exam	
Total	

To obtain a pass in the unit, students must submit a literature review report and undertake the final exam

**15. Student learning outcome:**

By the end of this course, students should be able to:

- Understand the general definition of research design.
- Explain the reasons for undertaking research.
- Identify and comprehend the entire process of designing a research study, from its inception to the final report.
- Demonstrate familiarity with ethical issues in educational research, including those that arise in quantitative and qualitative research.
- Identify research problems as stated in a study.
- Compose a well-structured introduction to an educational research study, including an understanding of the components that make up such an introduction.
- Conduct a comprehensive literature review.
- Write and potentially publish research findings.

**16. Course Reading List and References:**

- Mukherjee, S. P. (2020). A Guide to Research Methodology: An Overview of Research Problems, Tasks and Methods. CRC Press. - Bairagi, V., Munot, M.V., 2019.

Research Methodology: A Practical and Scientific Approach. - Cohen, L., Manion, L., Morrison, K. (2018). Research Methods in Education. London: Routledge, <https://doi.org/10.4324/9781315456539> - Kumar, R. (2011).

Research Methodology: A step-by-step guide for beginners (3rd edition). London, UK: TJ International Ltd, Padstow, Cornwall. - Denscombes, M. (2010).

The Good Research Guide: For small-scale social research projects. Mainde-read: Open University Press.

**17. Theory Topics:** Note: \* Class content may change slightly, and classes may overlap.**1. What is Research**

Characteristics of Research

Why Research is Important to Students?

**Lecturer's name**

Dr. Hayman K. Alwa

**2. Literature survey and documentation**

What is literature review?

Why the needs for literature review?

How to carry out a literature review?

Methods of literature survey, use of library, books, journals, e-journals, thesis, chemical abstracts and patent database, importance of documentation, documentation techniques, use of computer

programs/packages.	
<b>3. Writing a review paper</b> Selecting a Problem and Reviewing the Literature Design a review paper Discussion ( <b>Practicing writing review paper</b> )	
<b>4. Writing an Introduction</b> <b>Writing Material &amp; Methods</b>	
<b>5. Writing Literature Review</b>	
<b>6. Writing Results and Discussion</b> Tables Figures Discussion Conclusion Abstract	
<b>7. References</b> Reference styles Endnote Mendeley	
<b>8. Research Problem</b> What is a Research Problem? Selecting the Problem Necessity of Defining the Problem Technique Involved in Defining a Problem	
<b>9. Types of research</b> Basic Research Applied Research Problem Oriented Research Problem Solving Research Qualitative Research Quantitative Research <b>Research types at the University</b> Differences among Postgraduate and Undergraduate Research Research at the postgraduate level (PhD and MSc) <b>Types of journal articles</b> Original Research Short reports or Letters Review Articles Case Studies Methodologies or Methods	
<b>10. Writing Research Proposals</b> Why do we need to write research proposals? How to write Good Research Proposals? Case Study Research Question Selecting and defining a research problem Building the Theory Research Design	

<p><b>11. Design of Research Presentations</b> Create a Poster and Oral Presentation</p>	
<p><b>12. Practical Writing Tips</b> What makes a great paper Starting to write for a high impact factor journal</p>	
<p><b>13. Find reliable journal for Manuscript and submit</b> Journal finder Submit your paper Manuscript after submission Why peer review? Peer Review types</p>	
<p><b>14. Design and General Information on Thesis Writing</b> Saving thesis font Headings and sub headings Table of content Table of tables and table of figures Page numbering References Equation</p>	
<p><b>15. Reviewing a review paper and presentation</b></p>	
<p><b>18. Practical Topics (If there is any)</b></p>	
<p><b>19. Examinations:</b></p>	
<p><b>20. Extra notes:</b> Here the lecturer shall write any note or comment that is not covered in this template and he/she wishes to enrich the course book with his/her valuable remarks.</p>	
<p><b>21. Peer review</b> <span style="float: right;">پیداچوونہوہی ھاوہل</span> I approve that the course is comprehensive and cover all the aspects of the course. Name: Degree: Specialty: Sign: Date:</p>	