

Research Methods

2024

Research Methods

“Great scholars do not solve problems; they create them.”

-Albert Einstein



Required Outcomes

At the end of the course students should be able to:

- Understand research terminology
- Be aware of the ethical principles of research, ethical challenges and approval processes
- Describe quantitative, qualitative and mixed methods approaches to research
- Identify the components of a literature review process
- Critically analyse published research
- Write a research proposal



Introduction

This unit is designed to give ICT research students an appreciation of the significance of research and provide students with research skills, knowledge and understandings that will enable them to conduct their own research in a rigorous manner. The unit will encourage critical understanding of qualitative and quantitative approaches in research and explore the research process. The unit includes the design of data collection tools and an introduction to quantitative and qualitative data collection and analysis techniques. Students will gain an

understanding of the theory and practice of methods and approaches applicable to the conduct of ICT research. They will have the capacity to design and communicate research proposals for ICT projects and to critically assess and evaluate alternative approaches to conducting research on ICT issues. They will consider the ethical issues involved in planning, conducting and reporting research. Students will be challenged to apply concepts and critically engage with issues as they relate to personal research needs and the assessment items will relate to their research topic.

The unit includes the design of data collection tools and an introduction to quantitative and qualitative data collection and analysis techniques. Students will gain an understanding of the theory and practice of methods and approaches applicable to the conduct of ICT research. They will have the capacity to design and communicate research proposals for IT projects and to critically assess and evaluate alternative approaches to conducting research on IT issues. They will consider the ethical issues involved in planning, conducting and reporting research. Students will be challenged to apply concepts and critically engage with issues as they relate to personal research needs and the assessment items will relate to their research topic.



Assessment

Grading policy

The final mark for the course will comprise the following elements:

| Criteria | % |
|---|----|
| Group Assignment | 5 |
| Group Assignment (Problem Identification and Formulation) | 10 |
| Online Forum Discussion and participation on padlet | 5 |
| Quiz | 30 |

| | |
|--------------|-------------|
| Final Exam | 50 |
| Total | 100% |



Lecturer









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|-----------------------|---|
| Lecturer | Sheba Rusoke Nyakaisiki |
| Telephone | Cell: 0782 316028 |
| E-mail | snyakaisiki@umu.ac.ug |
| Qualifications | BA EDS (Uganda Martyrs University), MSc Computing (University of Bradford) PhD (TU Delft) |



Course Schedule

The schedule for the course is indicated in the table below. Note that ***preparation is required before the class-contact days***. The schedule suggests a work pace to ensure that you can actually work through all the course material.

| Week | Date | Action |
|------|---|---|
| 1 | Week 1 1 st & 2 nd 30 th - 31 st August 2024 | <ul style="list-style-type: none"> Introductions to the class Establishing Baseline Knowledge of Research with participants and introducing Research Areas in IS and ICT Introduction to Moodle Online Discussion on Uploaded articles |
| 2 | Week 2 6 th & 7 th Septem ber 2024 | <ul style="list-style-type: none"> Brief Discussion on Uploaded articles Introduction to Research Introduction to generic research approaches (Zoom Session) Literature Review and Problem Identification Online Forum Discussion on Generic Research Approaches Assignment 1 – Literature Review and Identification of Research Components in existing research publications (Group work) |
| 3 | Week 3 13 th & 14 th Septem ber 2024 | <ul style="list-style-type: none"> Presentation and Discussion on Assignment 1 Research Methods (Zoom Session) Qualitative Quantitative Mixed Methods Designing a Research Project Online Forum Discussion on Research Methods Assignment 2 – Problem identification from ICT and IS |

| Week | Date | Action |
|------|---|--|
| | | Research Areas (Group Work) |
| | |  |
| 4 | Week 4 20 th & 21 st Septem ber 2024 |  Presentation and Discussion of Assignment 2  Research Question vs Hypothesis (Pre-recorded)  Research Design (Pre-recorded)  Zoom session on pre-recorded lecturers  Online Forum Discussion Research Question Vs Hypothesis/ Research Design |
| 5 | Week 5 27 & 28 th Septem ber 2024 |  Analysis and Presentation of Data  Assignment 3 - Quiz |
| 6 | Week 6 4 th and 5 th October 2024 | <u>Final Exam Concept Paper</u> |

END