



UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

FACULTY OF ENGINEERING, DESIGN AND TECHNOLOGY
DEPARTMENT OF COMPUTING AND TECHNOLOGY
ADVENT 2025 SEMESTER EXAMINATION

PROGRAM: MASTER OF SCIENCE IN DATA SCIENCE & MASTER OF SCIENCE IN COMPUTER SCIENCE

YEAR: 1 SEMESTER: 1

COURSE CODE: RSM8101

COURSE NAME: RESEARCH METHODS AND PUBLICATION

EXAMINATION TYPE: PROJECT-BASED EXAM

PROJECT DURATION: ADVENT 2025

TIME ALLOWED: [14 DAYS]

Examination Instructions

1. The general Uganda Christian University examination guidelines and academic & financial policies apply to this examination. Violating any of the policies by the student automatically makes this examination attempt void, even if you have completed and submitted the answer booklet.
 2. This exam consists of a project to be executed in [14] days.
 - i. This is a project-based exam.
 - ii. This exam has two questions - answer all questions
 3. The assessment of the project shall be based on five milestones.
 4. Include relevant citations and references.
 5. **All submissions must be made through Moodle.**
 6. Uganda Christian University or its officials reserve the right of admission or disqualification from this exam.

Project-based assessment guidelines (This project counts for 30% of your final grade)

S/N	Milestone Description	Maximum Marks
1	MILESTONE ONE -Title and executive summary - SDG & NDP IV Alignment	15 %
2	MILESTONE TWO Chapter 1: - A well-written introduction and background - A well-written problem statement - A well-written set of research objectives and research questions - Justification backed up with literature	25%
3	MILESTONE THREE Chapter 2: - A well-written literature review citing relevant journal articles and other relevant sources. - A well-written literature review structure.	25%
4	MILESTONE FOUR Chapter 3: - A well-written methodology	20%
5	MILESTONE FIVE - A well-written conclusion - References, budget, workplan - Technical writing, proficiency; clarity, and flow	15%
	TOTAL MARKS	100 %

Question 1: Project Proposal

Select one SDG that aligns with Uganda's strategic development priorities, according to National Development Plan IV (2026-2030). Based on this, propose a **research-based project** that applies computer science or data-driven concepts to address a specific challenge within that domain.

Your proposal should demonstrate:

- A clear understanding of the selected SDG and its local relevance.
- Alignment with Uganda's National Development Plan IV goals and strategies.
- Application of appropriate computer science or data science methodologies.
- Consideration of ethical, social, and sustainability implications.
- Expected outcomes, beneficiaries, and potential for scalability or policy integration.

The proposed project should be in any of the following domains.

- a. Big Data & Cloud Engineering
- b. Software Engineering
- c. Artificial Intelligence & Machine Learning
- d. Business Intelligence & Financial Analytics
- e. Systems, Infrastructure & Cybersecurity
- f. Operational & Health Analytics
- g. Game Engineering & Augmented Reality
- h. Security & Forensics

The output from this exam should be a well-written Project Proposal (Font: Trebuchet MS, 12Pts, 1.5 spacing, justified, aligned, IEEE Referencing style, 10 pages Max, excluding references).

The proposal may follow the structure below.

1. Title
2. Executive Summary (1/2 Page)
3. Chapter 1
 - a. Introduction or Background
 - b. Problem Statement
 - c. Research Objectives
 - d. Research Questions
 - e. Justification
4. Chapter 2 - Literature Review (minimum of 2 pages)
5. Chapter 3 - Methodology
6. Conclusion that highlights expected results and Impact
7. Budget (if necessary)
8. Workplan

Question 2: Publication Strategy

Identify two reputable publication outlets (either peer-reviewed journals or conference publications) where your proposed project could be submitted. Justify your choices based on:

- Scope and relevance of the outlet to your topic.
- Target audience
- Impact factor.
- Regional or global visibility.
- Open access or indexing status.

~END OF PROJECT EXAM~