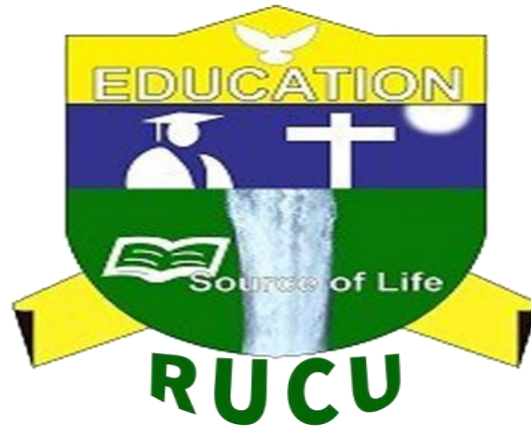


RUAHA CATHOLIC UNIVERSITY

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE



CONCEPT NOTE AND SYNOPSIS

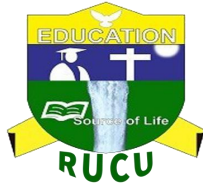
TITLE: INTEGRATED LEARNING PORTAL (RUCU-ILP)

THIRD YEAR PROJECT

YEAR OF STUDY:2025-2026

SUBMITTED BY:

NO	FULL NAME	REGISTRATION
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INTEGRATED LEARNING PLATFORM (ILP) FOR UNIVERSITY STUDENTS IN ICT FACULTY AT RUCU.

1. Introduction and Background

The Faculty of ICT at Ruaha Catholic University currently manages critical academic activities such as coursework, assessment, field placement, and final-year project supervision using fragmented systems and manual processes. These disconnected procedures cause operational inefficiencies, data duplication, delayed reporting, and limited visibility for administrators and stakeholders.

The **RUCU Integrated Learning Portal (RUCU-ILP)** is a digital transformation initiative designed to offer a unified academic and learning environment for students, lecturers, and administrators. The platform integrates student data management, marks processing, project workflows, field management, and public faculty communications into a single centralized web application. It supports seamless real-time data sharing, automation of routine tasks, and enhanced user interaction through dashboards and role-based access control.

This concept note reflects on the requirement, design decisions, and implementation journey of RUCU-ILP as a complete academic management solution for the Faculty of ICT.

1. Problem Statement

The Faculty of ICT faces operational challenges due to distributed and largely manual academic processes:

- i. **Fragmentation Crisis:** Our faculty operates with disconnected systems - marks in spreadsheets, projects in email attachments, fieldwork on paper. This creates dangerous data silos that compromise academic integrity and decision-making.
- ii. **Resource Drain:** Lecturers spend 40% of their time on administrative tasks rather than teaching and research.
- iii. **Ineffective tracking** of student project supervision and defence progress.
- iv. **Lack of centralized monitoring** for student field stations and logbooks.
- v. **Limited channels** for faculty announcements and communication.

- vi. Difficulty in generating accurate and aggregated analytics for decision-making.

As ICT faculty grows, these challenges create administrative burdens, delays in academic workflows, and a poor learning experience for students.

2. General Objective

The overarching goal of RUCU_ILP is to digitize, integrate, and streamline all academic and administrative operations within the ICT Faculty through a secure, user-friendly web portal. Specifically, the system aims to:

3. Specific Objectives

- i. To Digitize 90% of academic workflows, eliminating paper-based processes and manual errors.
- ii. To automate project supervision, submissions, evaluations, and defence scheduling.
- iii. To centralize field request workflows, station management, and logbook monitoring.
- iv. To enable real-time access to reports, analytics, and performance dashboards.
- v. To Create a public-facing digital showcase that attracts prospective students, faculty, employers, companies and research partners.

4. Scope of the Project

NO	In-Scope Functional Areas	Out-of-Scope
1	Academic Management: Student/Lecturer registration, program/course setup, assessment creation, marks entry, and grade computation.	Chat/Messaging System
2	Project Management: Group formation, project phase tracking, document submission, supervisor/panellist assignment, evaluation, and defence scheduling.	SMS reminders & Calendar syncing
3	Fieldwork Management: Field station requests, logbook entries, status tracking, and officer evaluations.	Digital certificate generation
4	Public website for faculty showcases and staff workflow.	Integration with external university systems

6. Significance of the Study

The system provides significant benefits to academic governance and student learning:

Stakeholder	Value Added
Students	Instant access to marks, uploads, logbook and project tracking.
Lecturers	Simplified marking, supervision management, centralized dashboards.
HOD & Admins	Accurate analytics for decisions, performance tracking, role control.
Institution	Improved academic credibility, digitization compliance, data integrity.
Community & Industry	Better-prepared ICT graduates with monitored field exposure.

This transformation supports RUCU in advancing quality, transparency, and efficiency in higher education.

7. Methodology

Software-Based Development

Phase	Activities	Deliverables
Requirements Analysis	Stakeholder interviews, business process review.	System requirements docs
Design & Architecture	MVC structure, ERD, UI wireframes	Database schema and system structure
Implementation	PHP Backend, MySQL DB, Bootstrap UI	Fully functional ILP modules
Integration & Testing	Functional, security, and user testing	Stable production-ready system
Deployment	Hosting on Apache server	Live ILP system for RUCU

Maintenance & Review	Debugging, performance optimization, user feedback.	Updated feature releases
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Hardware Requirements (Minimal)

- Server / Hosting capability (XAMPP environment)
- Computers for staff and student access
- Reliable internet connection
- Backup power (optional)

8. Expected Outcomes

Upon completion, the system will deliver the following outcomes:

1. A unified database and centralized academic management workflow
2. Secure dashboards for different academic roles
3. Automated marks, project, and field evaluation reports
4. Efficient communication via digital announcements
5. Reduced paperwork and improved operational transparency
6. Data-driven oversight improving academic decision-making
7. Scalable system ready for future expansion (mobile app, AI, SMS).

Conclusion

The RUCU_ILP serves as a model of digital transformation in higher education, demonstrating how technology can streamline learning and academic administration. This concept note reflects not only the system's current capabilities but also its potential to grow into a comprehensive digital ecosystem supporting both student success and faculty excellence.