LEARning management system FOR SYS college

**zohaib waqar**

ex dev & Technical business analyst

BUSINESS REQUIREMENT DOCUMENT

07 may 2025

Table of Contents

**Author Change Control & Approvers2**

**Executive Summary3**

**Glossary3**

**User Personas4**

**Business Goals4**

**Project Overview & Objectives4**

Overview4

Objectives4

**Project Scope5**

In Scope5

Out of Scope5

**Success Criteria5**

**Current State5**

**Target State5**

**RAID (Risks, Assumptions, Issues, Dependencies)6**

**Major Requirements6**

**Business Rules8**

**Data Privacy & Security Requirements8**

**Accessibility Considerations** **9**

**Business Process Flow9**

**Reports & KPI9**

**Reference Documents10**

**Project Schedule (High-Level Milestones)10**

1. **Author Change Control & Approvers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | version | Date | Author | description |
| 1 | 1.0 | 07 May 2025 | Zohaib Waqar | Initial Draft |

**Reviewed By:** [Reviewer Name Here]

**Approved By:** [Approver Name Here]

1. **Executive Summary**

This BRD outlines the business needs, goals, and high-level requirements for implementing a modern Learning Management System (LMS) at Sys College. This system aims to support strategic objectives such as improving teaching quality, increasing student engagement, and enabling digital transformation across campuses. The document is informed by stakeholder interviews and aligned with institutional priorities.

1. **Glossary**

|  |  |  |
| --- | --- | --- |
| # | Term | definition |
| 1 | LMS | Learning Management System |
| 2 | SIS | Student Information System |
| 3 | RBAC | Role-Based Access Control |
| 4 | SSO | Single Sign-On |
| 5 | KPI | Key Performance Indicators |

1. **User Personas**
   1. **Lecturers / Tutors**: Deliver course content and manage assessments
   2. **Students**: Consume learning materials, submit assignments
   3. **Admin Staff**: Manage enrollments, scheduling, records
   4. **Department Heads**: Monitor academic progress, resource utilization
   5. **IT Staff**: Manage integration, security, infrastructure
   6. **Executives (VPs)**: Monitor KPIs, strategic alignment, funding
2. **Business Goals**
   1. Deliver a superior student learning experience
   2. Increase teaching quality and academic effectiveness
   3. Support data-driven decision-making across departments
   4. Streamline academic and administrative operations
   5. Enable digital and remote learning across campuses
3. **Project Overview & Objectives**
   1. **Overview**

The LMS project is part of Sys College's strategic vision to lead in teaching excellence. The system will centralize learning activities, enable performance tracking, and improve communication among faculty, students, and administrators.

* 1. **Objectives**
     1. Implement a cloud-based LMS with role-based access
     2. Provide integration with SIS, Active Directory, and HRMS
     3. Enable dashboards for monitoring engagement and performance
     4. Support mobile and offline access to content
     5. Automate grading, attendance, and notifications

1. **Project Scope**
   1. **In Scope**
      1. Centralized content management and learning modules
      2. Assignment submissions and grading workflows
      3. Real-time dashboards and analytics
      4. Mobile and offline access
      5. Integration with core systems (SIS, AD)
      6. Role-based access and permissions
   2. **Out of Scope**
      1. Physical infrastructure upgrades
      2. Third-party course content creation
      3. External certification or accreditation platforms
2. **Success Criteria**
   1. **85%** adoption rate within one academic term
   2. Reduction in grading and reporting time by **40%**
   3. Student satisfaction score improvement by **25%**
   4. **Real-time visibility** of academic KPIs
3. **Current State**
   1. Fragmented tools: emails, shared drives, physical materials
   2. Manual tracking of attendance, grading, and progress
   3. No unified view of course performance or engagement
4. **Target State**
   1. Centralized, secure LMS platform with integrated tools
   2. Automated workflows and unified communication channels
   3. Role-specific dashboards for faculty, students, and executives
5. **RAID (Risks, Assumptions, Issues, Dependencies)**

|  |  |
| --- | --- |
| Type | Description |
| Risk | Resistance to change from senior faculty |
| Assumption | Staff and students will have basic digital literacy |
| Issue | Integration delays with legacy systems |
| Dependency | SIS, HRMS, AD system compatibility |

1. **Major Requirements**

The following section outlines the major system requirements for the LMS project using the **MoSCoW** **prioritization** method, along with the corresponding stakeholder sources.

* 1. **Must Have**

These are critical requirements without which the system will not function as intended.

|  |  |
| --- | --- |
| Requirement | Source |
| Centralized course content repository for all departments | Academic Staff, Students |
| Assignment submission and automated grading workflows | Academic Staff, Students |
| Automated notifications for deadlines, grades, and announcements | Academic Staff, Students |
| Mobile-responsive design with offline access capability | Students |
| Role-Based Access Control (RBAC) to manage permissions | IT Department |
| Integration with Student Information System (SIS) and Active Directory (AD) | IT Department |
| Secure authentication with SSO and MFA | IT Department, Executives |
| Real-time dashboards for student performance and faculty activity | Department Heads, Executives |

* 1. **Should Have**

Important features that add significant value but are not essential at initial rollout.

|  |  |
| --- | --- |
| Requirement | Source |
| Attendance tracking through login/session logs | Admin Staff, Academic Staff |
| Course completion tracking for students | Academic Managers, Students |
| Messaging/chat system within the platform | Students, Academic Staff |
| Document version control for uploaded materials | Academic Staff |
| Basic plagiarism detection integration | Academic Staff |

* 1. **Could Have**

Desirable features that can enhance the user experience if time and budget permit.

|  |  |
| --- | --- |
| Requirement | Source |
| Peer review and collaborative group project tools | Students |
| Gamification elements (badges, leaderboards) | Students |
| AI-based recommendations for learning content | Executives |

* 1. **Won't Have (for now)**

These features are out of scope for the initial phase but may be considered in future enhancements.

|  |  |
| --- | --- |
| Requirement | Source |
| Integration with third-party MOOC platforms (e.g., Coursera) | Project Scope Decision |
| Fully automated course recommendation engine | Executive Interview, marked as future enhancement |
| External accreditation or certification workflows | Executive Team, marked out-of-scope |

1. **Business Rules**
   1. Only faculty can modify course content
   2. Students can view only their enrolled modules
   3. Attendance must be auto-logged for every session
2. **Data Privacy & Security Requirements**
   1. Compliance with GDPR and national education data policies
   2. Multi-factor authentication and SAML-based SSO
   3. Encrypted data storage and secure user sessions
3. **Accessibility Considerations**
   1. WCAG 2.1 compliant UI for visually impaired users
   2. Keyboard navigability and screen reader compatibility
   3. Mobile responsiveness
4. **Business Process Flow**
   1. [Insert high-level diagram showing: Course Creation → Enrollment → Content Delivery → Assessment → Feedback → Reporting]
5. **Reports & KPI**
   1. Faculty performance dashboard
   2. Student engagement & retention reports
   3. Real-time grading summaries
   4. Assignment submission compliance
6. **Reference Documents**
   1. [Requirements Elicitation Document (dated: 03 May 2025)](https://github.com/ZohaibWaqarMalik/Technical-Business-Analyst-Projects/blob/main/02%20-%20LMS-SysCollege/01%20-%20Requirements%20Elicitation/01%20-%20Requirement%20Elicitation.pdf)
   2. [Stakeholder Interview Summaries (dated: 05 May 2025)](https://github.com/ZohaibWaqarMalik/Technical-Business-Analyst-Projects/blob/main/02%20-%20LMS-SysCollege/01%20-%20Requirements%20Elicitation/02%20-%20Requirements%20Elicitation%20-%20Questionaries.pdf)
   3. Appendix A: System Requirements Matrix
   4. Appendix B: Business Process Flow
7. **Project Schedule (High-Level Milestones)**

|  |  |
| --- | --- |
| Milestone | Target Date |
| BRD Approval | [Insert] |
| System Design Completion | [Insert] |
| Development Start | [Insert] |
| User Testing | [Insert] |
| Go-Live | [Insert] |

**Appendix A**

**SYSTEM REQUIREMENTS MATRIX**

|  |  |  |  |
| --- | --- | --- | --- |
| # | Requirement | Stakeholder Group | Department / Function |
| 1 | Centralized course content and learning material management | Academic Staff, Students | Faculty / Academic Affairs |
| 2 | Student progress tracking and performance analytics | Faculty, Dept. Heads, Execs | Academic, Quality Assurance |
| 3 | Automated assignment submission and grading workflows | Faculty, Admin Staff | Academic Operations |
| 4 | Mobile-friendly interface and offline access | Students | Student Affairs / IT |
| 5 | Push notifications and alerts for deadlines/grades | Students, Faculty | Academic Affairs / Communications |
| 6 | Role-based access control (RBAC) | IT Department, Execs | IT / Information Security |
| 7 | Real-time dashboards and academic reporting | Department Heads, Executives | Academic Affairs / Strategic Planning |
| 8 | Integration with SIS, HRMS, and Active Directory | IT Department | IT / Infrastructure |
| 9 | Cloud-based hosting with backup and scalability | IT Department, Executives | IT / Digital Transformation |
| 10 | Audit trails for grades, attendance, and system activity | Admin Staff, QA Officers | Compliance / QA |
| 11 | Multi-campus support and scalability | Executives, IT Dept. | Institutional Planning / IT |
| 12 | KPI tracking for retention, engagement, and teaching output | Executives, Academic Managers | Strategic Leadership / Inst KPIs |
| 13 | Secure authentication (SSO, MFA, SAML) | IT Department | Information Security |
| 14 | User training and change management support | Academic Staff, Admin Staff | HR / Professional Development |

Table A1: System Requirements Matrix

This matrix outlines the high-level functional requirements identified through stakeholder interviews, mapping each requirement to its corresponding stakeholder group and functional department to ensure traceability and alignment with institutional needs.