Vision and Scope Document

for

Cursus LMS

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**Table of Contents**

Table of Contents ii

Revision History ii

1. Business Requirements 1

1.1. Background 1

1.2. Business Opportunity 1

1.3. Business Objectives 1

1.4. Success Metrics 1

1.5. Vision Statement 1

1.6. Business Risks 2

1.7. Business Assumptions and Dependencies 2

2. Scope and Limitations 2

2.1. Major Features 2

2.2. Scope of Initial and Subsequent Releases 3

2.3. Limitations and Exclusions 3

3. Business Context 4

3.1. Stakeholder Profiles 4

3.2. Project Priorities 5

3.3. Deployment Considerations 5

# Business Requirements

## Background

The traditional method of registering for courses, which often involves in-person visits to educational institutions or handling physical paperwork, can be time-consuming and inefficient. This approach may lead to long waiting times, especially during peak registration periods, and may result in missing out on early registration discounts or limited spots in popular courses. Moreover, managing student records, course schedules, and payments manually can be prone to errors and cumbersome for both administrators and students.

To address these challenges, a web application for online course registration is proposed. This system will streamline the registration process, allowing students to browse and enroll in courses easily. It will also provide features for managing course schedules, handling payments, and offering students a convenient platform to access course materials and announcements. The system aims to enhance the overall efficiency and user experience, making course registration more accessible and organized.

## Business Opportunity

The demand for online education has been growing steadily, creating a significant business opportunity for a web application that facilitates course registration. Traditional methods of course registration often involve long queues, paperwork, and limited access to information about available courses. This can be frustrating for students and inefficient for educational institutions.

A web app for online course registration addresses these challenges by providing a streamlined, user-friendly platform. It allows students to browse courses, check schedules, and enroll in classes from the comfort of their homes. This convenience can attract a broader range of students, including those who may be unable to attend in-person registrations due to time or location constraints.

For educational institutions, the system offers an efficient way to manage course offerings, track enrollment, and handle payments securely. It can also support marketing efforts by highlighting new courses, special programs, and promotional offers, potentially increasing enrollment rates. Moreover, by automating administrative tasks, the app reduces the workload on staff, minimizes errors, and enhances overall operational efficiency.

Overall, this web app not only improves the registration experience for students but also provides educational institutions with a powerful tool to manage their offerings, optimize resources, and expand their reach in the competitive online education market.

## Business Objectives

BO-1: **Increase Enrollment**: Boost the number of students enrolling in courses by providing a seamless and accessible online registration platform. Aim for a 20% increase in enrollment rates within the first year of implementation.

BO-2: **Enhance User Experience**: Develop a user-friendly interface that simplifies the course selection and registration process, making it easy for students to find, evaluate, and enroll in courses. Achieve a high user satisfaction rate, aiming for a score of 4.5 out of 5 in user feedback surveys.

BO-3: **Streamline Administrative Processes**: Automate administrative tasks such as course management, scheduling, and payment processing to reduce workload on staff and minimize errors. This should result in a 30% reduction in time spent on manual administrative tasks.

BO-4: **Increase Revenue**: Leverage the online platform to promote special courses, early bird discounts, and bundled offerings to maximize revenue. Target a 15% increase in revenue from course fees and related services.

BO-5: **Expand Market Reach**: Utilize digital marketing strategies to reach a broader audience, including international students. Set a goal to increase the number of new users by 25% within the first year.

BO-6: **Data-Driven Insights**: Implement analytics to track user behavior, course popularity, and other key metrics. Use this data to refine course offerings, marketing strategies, and user engagement, aiming for a 10% improvement in user retention and repeat enrollments.

BO-7: **Secure and Scalable Infrastructure**: Ensure that the platform is built on a secure and scalable infrastructure that can handle increased traffic, protect user data, and adapt to future growth. Aim for a 99.9% uptime and compliance with relevant data protection regulations.

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## Success Metrics

· **Enrollment Growth**

* **Target:** Achieve a 20% increase in student enrollments within the first year.
* **Measurement:** Compare the number of enrollments before and after the implementation of the online registration system.

· **User Satisfaction**

* **Measurement:** Conduct regular surveys and feedback forms to gather user opinions on the ease of use, accessibility, and overall experience with the platform.

## Vision Statement

To revolutionize the way people access education by providing a seamless and comprehensive online course registration platform that empowers students and educators alike. We envision a future where learning is accessible to everyone, regardless of their location or schedule, and where educational institutions can efficiently manage and expand their offerings. Our platform aims to be the go-to solution for online course registration, fostering a community of lifelong learners and educators dedicated to continuous growth and knowledge sharing.

## Business Risks

RI-1: Market Competition: The online education sector is highly competitive, with numerous platforms offering similar services. Increased competition could lead to a decrease in market share and revenue. (Probability = 0.4; Impact = 8)

RI-2: User Adoption: There is a risk that students and educational institutions may be slow to adopt the new platform, reducing the return on investment and impacting overall success. (Probability = 0.3; Impact = 7)

RI-3: Technical Challenges: Technical issues such as system downtime, bugs, or security breaches could affect user trust and satisfaction, potentially leading to a loss of users. (Probability = 0.2; Impact = 9)

RI-4: Regulatory Compliance: Non-compliance with data protection regulations (such as GDPR or local privacy laws) could result in legal penalties and damage to the platform's reputation. (Probability = 0.2; Impact = 7)

RI-5: Revenue Dependence on Seasonal Enrollment: The platform's revenue may fluctuate based on academic cycles, with peak enrollments occurring at specific times of the year. This seasonal dependency could impact financial stability. (Probability = 0.3; Impact = 6)

RI-6: Content Quality and Relevance: The success of the platform depends on the quality and relevance of the courses offered. Poor quality or outdated content could lead to decreased user engagement and satisfaction. (Probability = 0.3; Impact = 8)

RI-7: Economic Downturns: Economic downturns can reduce discretionary spending on education, affecting enrollment rates and revenue. (Probability = 0.2; Impact = 7)

RI-8: Instructor and Institution Partnership: The platform's success relies on strong partnerships with instructors and educational institutions. Challenges in securing or maintaining these partnerships could limit course availability and diversity. (Probability = 0.4; Impact = 6)

## Business Assumptions and Dependencies

AS-1: **Platform Usability**: It is assumed that the online course registration platform will have a user-friendly interface that is accessible to both students and educational institutions, facilitating easy navigation and use.

AS-2: **Course Availability**: There will be a sufficient variety of courses available on the platform to meet the diverse interests and needs of students, ensuring continuous user engagement and satisfaction.

AS-3: **Stable Internet Access**: Students and educational institutions will have reliable internet access, which is critical for using the platform, accessing course materials, and engaging in online learning activities.

DE-1: **Integration with Payment Systems**: The platform must be able to integrate seamlessly with various payment systems and gateways to facilitate secure and efficient processing of course fees and other transactions.

DE-2: **Partnership with Educational Institutions**: The platform’s success depends on establishing and maintaining partnerships with educational institutions and instructors, who are critical for providing high-quality content and promoting the platform.

DE-3: **Regulatory Compliance**: The platform must comply with relevant educational and data protection regulations, which is essential for legal operation and maintaining user trust.

# Scope and Limitations

## Major Features

FE-1: Course Registration: Allow students to browse available courses, register for classes, and make payments online.

FE-2: Course Management: Enable educational institutions to create, view, modify, and manage course listings, schedules, and content.

FE-3: User Accounts: Provide functionalities for students and institutions to create, view, modify, and manage user accounts and profiles.

FE-4: Payment Processing: Integrate with payment gateways to process course fees securely and efficiently.

FE-5: Course Materials: Allow students to access course materials, announcements, and updates through the platform.

FE-6: Reporting and Analytic: Provide reporting and analytic tools for institutions to track enrollment data, revenue, and user engagement.

## Scope of Initial and Subsequent Releases

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| **Feature** | **Release 1** | **Release 2** | **Release 3** |
| **FE-1, Course Registration** | Basic course search and registration functionality; payment by credit/debit card only | Accept payments through additional gateways (e.g., PayPal); Enhanced course search features | Support for early-bird discounts and promotional codes; Integration with institution-specific registration systems |
| **FE-2, Course Management** | Basic course creation and viewing functionality for institutions | Ability for institutions to modify and manage course details; Enhanced reporting features | Advanced course management tools including scheduling and recurring courses |
| **FE-3, User Accounts** | Basic account creation and profile management for students and institutions | Enhanced profile management features including password recovery and multi-factor authentication | Advanced user account customization and analytics |
| **FE-4, Payment Processing** | Secure payment gateway integration for credit/debit cards | Integration with additional payment methods (e.g., bank transfers); Support for multiple currencies | Advanced payment features including installment plans and financial aid management |
| **FE-5, Course Materials** | Access to course materials and announcements | Enhanced materials management including uploading and sharing resources | Advanced materials features including interactive content and multimedia support |
| **FE-6, Reporting and Analytic** | Basic enrollment and revenue reports | Advanced reporting features including user engagement and performance metrics | Comprehensive analytic dashboard with predictive insights and custom reports |

## Limitations and Exclusions

FL-1: In-Person Services: The platform will not support in-person services such as physical registration or on-site course materials distribution.

FL-2: External System Integration: The platform may have limited integration capabilities with external systems beyond the specified payment gateways and institutional databases.

FL-3: Technical Support: Technical support will be limited to issues related to the platform's functionality and usability, excluding third-party software or hardware problems.

FL-4: Course Content Quality: The platform does not guarantee the quality or accreditation of the courses provided by external institutions; this is the responsibility of the educational providers.

FL-5: User Training: The platform will not include extensive training modules for users; basic guidance and support will be provided within the application.

FL-6: Compliance Updates: The platform will ensure compliance with current regulations but may require updates to remain compliant with new or changing laws and standards.

# Business Context

## Stakeholder Profiles

| **Stakeholder** | **Major Value** | **Attitudes** | **Major Interests** | **Constraints** |
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| **Corporate Management** | Improved student enrollment; cost-effective course management | Strong commitment through initial release; support for future releases contingent on earlier results | The benefits of increased enrollment and efficient course management must outweigh development and operational costs | None identified |

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| **Educational Institutions** | Streamlined course registration; improved administrative efficiency | Receptive to the new system, but concerned about the learning curve and integration with existing systems | Efficient course management; ease of integration with current systems | Integration with existing systems may require additional customization; staff training needed |

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| **Students** | Easy access to course registration; convenience of online enrollment | Strong enthusiasm, though some may prefer in-person registration for certain courses | User-friendly interface; reliability of the registration process; variety of available courses | Access to a reliable internet connection is required; might face challenges if the platform is not intuitive |

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| **IT Department** | Implementation of a secure, scalable platform; minimal technical issues | Generally supportive but concerned about system security and integration complexity | Ensuring platform security and seamless integration with existing systems | Potential need for ongoing maintenance and updates; integration with other institutional systems may be complex |

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| **Course Instructors** | Enhanced course management tools; easier interaction with students | Positive but may require additional training for new features | Effective tools for course management and communication with students | Training required for using new tools; may need adjustments in current workflows |

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| **Finance Department** | Efficient handling of payments and financial reporting | Supportive but cautious about potential impacts on financial processes | Accurate and timely financial reporting; integration with financial systems | Additional financial reporting requirements; may need adjustments in financial systems and processes |

## Project Priorities

| **Dimension** | **Constraint** | **Driver** | **Degree of Freedom** |
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| **Features** | All features scheduled for Release 1.0 must be fully operational | Features must meet user needs and expectations | Flexibility in feature prioritization and scope adjustments based on feedback |

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| **Quality** | 95% of user acceptance tests must pass; all security tests must pass | Ensure high-quality and secure product | Limited flexibility; critical issues must be addressed promptly |

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| **Schedule** | Release 1 planned for end of Q1 next year, Release 2 by end of Q2; overrun of up to 2 weeks acceptable without sponsor review | Timely delivery to meet market and user expectations | Up to 2 weeks schedule slippage allowed without review; any additional delays require sponsor approval |

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| **Cost** | Budget overrun up to 15% acceptable without sponsor review | Maintain financial control while accommodating necessary changes | Up to 15% budget overrun allowed without review; further overruns require sponsor review |

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| **Staff** | Team consists of half-time project manager, half-time BA, 3 developers, and 1 tester; additional developer and half-time tester available if necessary | Adequate staffing to meet project needs | Flexibility to add resources as needed, with potential impact on cost and schedule |

## Deployment Considerations

The deployment of the web application will involve several key considerations:

**Web Server Upgrades**: The web server software must be upgraded to the latest version to ensure compatibility and security.

**Mobile Apps Development**:

* 1. **Release 1**: Focus on the core web application and ensure it is fully operational on desktop browsers.
  2. **Release 2**: Develop and deploy mobile apps for iOS and Android smartphones and tablets.
  3. **Release 3**: Develop and deploy corresponding apps for Windows Phone and tablets.

**Infrastructure**: Any necessary infrastructure changes, including server capacity and database modifications, must be completed before the second release to support the new mobile apps.

**User Training**: Develop training videos no longer than five minutes each for both the web-based and app-based versions of the platform. These videos should guide users on how to effectively use the system and access its features.

# 6. Quality Attributes

## 6.1 Usability Requirements

USE-1: The web application shall allow users to complete course registration with a single interaction.

USE-2: 95% of new users shall be able to successfully register for courses without errors on their first attempt.

USE-3: 80% of administrators shall be able to successfully create and manage course content on their first attempt.

## 6.2 Performance Requirements

PER-1: The system shall accommodate up to 400 users, with a maximum of 100 concurrent users during peak usage times, specifically from 9:00 A.M. to 10:00 A.M. local time. The estimated average session duration will be 8 minutes.

PER-2: 95% of web pages generated by the system shall load completely within 5 seconds from the time the user requests the page, assuming an Internet connection of 20 Mbps or faster.

PER-3: The system shall display confirmation messages to users within an average of 3 seconds and no more than 6 seconds after the user submits information.

## 6.3 Security Requirements

SEC-1: All network transmissions involving financial information or personally identifiable information shall be encrypted with 256-bit encryption.

SEC-2: Users must log in to the web application to perform all operations except for browsing course listings.

SEC-3: Only authorized administrators are allowed to create, modify, or delete course content, as per system access controls.

## 6.4 Safety Requirements

SAF-1: The system will provide information on course content and highlight any that may have prerequisites or restrictions to ensure users are adequately informed.

## 6.5 Availability Requirements

AVL-1: The web application shall be available at least 98% of the time between 5:00 A.M. and 5:00 P.M., excluding scheduled maintenance windows.

## 6.6 Robustness Requirements

ROB-1: If the connection between the user and the system is lost before a course registration is confirmed or canceled, the system shall enable the user to recover the incomplete registration and continue from where they left off.