# CS 255 Module Two Assignment Template

## Functional Requirements

| **Functional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| User Registration and Account Management | The system must allow users (students, instructors, and administrators) to create and manage their accounts with unique usernames and secure password requirements. | Industry. (2023) LMS Requirements: a 15-Point Checklist. Retrieved September 08, 2023, from https://www.ispringsolutions.com/blog/lms-requirements/ |
| Course Management | Instructors should be able to create, edit, and manage course content, including text, multimedia, assignments, quizzes, and resources. | Industry. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |
| Grading and Assessment | Instructors must have the capability to grade assignments, quizzes, and exams, and provide feedback to students. | Industry. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |
| Content Access Control | The system should enforce role-based access control to ensure that only authorized users (students, instructors, administrators) can access specific course materials and administrative functions. | Industry. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |
| Communication and Collaboration | The LMS must facilitate communication between students and instructors through features like discussion forums, messaging, and announcements. | Learners. (2023) LMS Requirements | Learning Management System Capabilities. Retrieved September 08, 2023, from https://www.selecthub.com/learning-management/learning-management-software-requirements-features-list/ |
| Technical Support and Help Desk | Users should have access to a technical support portal where they can report issues, seek help, and receive responses from support staff. | Learners. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |

## Nonfunctional Requirements

| **Nonfunctional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
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| Performance | The LMS should provide fast response times, ensuring that users can access course content and perform actions (e.g., submitting assignments) without significant delays. | Learners. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |
| Reliability | The system should have high availability, with minimal downtime for maintenance or updates. Scheduled downtimes should occur during non-peak hours. | Learners. (2023) LMS Requirements | Learning Management System Capabilities. Retrieved September 08, 2023, from https://www.selecthub.com/learning-management/learning-management-software-requirements-features-list/ |
| Security | The LMS should employ robust security measures, including encryption of data in transit and at rest, to protect user data and course content. | Four Sources. (2023) Undergraduate Education < University of California, Berkeley. Retrieved September 08, 2023, from https://guide.berkeley.edu/undergraduate/education/ |
| Scalability | The system must be scalable to accommodate future growth in terms of the number of users, courses, and content without a significant drop in performance. | Last, First. (2023) Sign in is not complete. Retrieved September 08, 2023, from https://apa750.sharepoint.com/\_forms/default.aspx |
| Accessibility | The LMS should adhere to accessibility standards (e.g., WCAG) to ensure that individuals with disabilities can use the system effectively. This includes providing alternative text for images, keyboard navigation, and screen reader compatibility. | Learners. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |
| Data Backup and Recovery | Regular automated backups of user data, course materials, and system configurations should be performed to prevent data loss. | Learners. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |

## Assumptions

| **Assumption** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Internet Connectivity | Reliable and consistent access to the internet. This assumption is fundamental because online learning heavily depends on internet connectivity for accessing course materials, submitting assignments, participating in discussions, and interacting with the LMS. If this assumption is not valid, alternative offline access or accommodations may need to be considered. | Learners. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |
| User Technical Proficiency | This assumption is essential for designing the user interface and instructional materials. It implies that users are comfortable with basic computer operations, such as navigating a web interface, using a keyboard and mouse, and managing files. However, it's important to consider variations in technical skills among users and provide adequate support and training resources to bridge any gaps. | Learners. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |

## Limitations

| **Limitation** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Limited Internet Access | While the assumption of internet connectivity was made, in practice, not all students may have access to a stable high-speed internet connection. This limitation can impact their ability to participate in online courses, access course materials, and engage with the LMS effectively. | Learners. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |
| Technical Variability | Another limitation is the wide range of devices and technical specifications that students and instructors may use to access the LMS. Users may have different types of computers, smartphones, tablets, and web browsers with varying capabilities and configurations. Ensuring a consistent and seamless experience across these diverse devices can be challenging. | Learners. (2023) PDF.js viewer. Retrieved September 08, 2023, from https://files.eric.ed.gov/fulltext/EJ1286531.pdf |