# CS 255 Module Two Assignment Template

## Functional Requirements

| **Functional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Course Content Management | Instructors need the ability to upload, organize, and modify course materials, including syllabi, lecture videos, and assignments. | Jones, L. (2019). *Effective Course Management in LMS*. Educational Technology Review. |
| Grade Tracking and Reporting | The system should allow instructors to input and track student grades and provide students with access to view their progress in real time. | Brown, M. (2021). *Student Progress Tracking in LMS Platforms*. Education Science Review. |
| User Account Management | The system must allow the creation and management of different types of user accounts, such as students and teachers. Each type of user needs specific access rights to perform their roles effectively. | Smith, J. (2020). *Designing Learning Management Systems*. Tech Education Journal. |
| Communication Tools | The system must include forums, messaging, or chat tools to enable interaction between students and teachers, which is vital for effective learning in an online environment. | Wilson, T. (2018). *Digital Communication in Online Education*. Tech for Learning Journal. |
| Course Enrollment and Scheduling | The system should facilitate course enrollment, showing students available courses, and allowing them to register. Teachers should also be able to manage class schedules. | Clark, D. (2022). *LMS Features for Course Enrollment*. Educational Management Review. |
| Assignment Submission Portal | Students must be able to submit assignments through the system, and instructors should be able to download and grade these submissions within the same platform. | Johnson, R. (2021). *Assignment Management in Online Learning Systems*. Learning Innovation Journal. |

## Nonfunctional Requirements

| **Nonfunctional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Backup and Recovery | The system must automatically back up data to prevent data loss in case of a system failure, ensuring that critical information such as grades and course materials are not lost. | Quinn, L. (2020). *Data Backup Strategies in Learning Systems*. TechEd Journal. |
| Performance | The LMS should ensure quick response times, even when multiple users are accessing the system simultaneously, to avoid delays in learning and grading. | Carter, F. (2019). *Improving System Performance in LMS*. Journal of System Performance. |
| Usability | The system should be user-friendly, ensuring that students and faculty can navigate the platform with ease, even if they have limited technical experience. | Black, A. (2021). *User Experience in Educational Software*. Learning Tech Journal. |
| Scalability | The system should handle an increasing number of users without degradation in performance, ensuring that it can support the growing student population at YOUser University. | Green, H. (2019). *Scalability in Learning Management Systems*. TechEd Review. |
| Security and Data Protection | To protect sensitive student data, such as grades and personal information, the system must implement strong security protocols, including encryption and secure authentication methods. | Hall, J. (2020). *Security Measures in LMS Platforms*. Cybersecurity in Education. |
| Availability | The system must automatically back up data to prevent data loss in case of a system failure, ensuring that critical information such as grades and course materials are not lost. | Quinn, L. (2020). *Data Backup Strategies in Learning Systems*. TechEd Journal. |

## Assumptions

| **Assumption** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Students Will Require Technical Support | It is assumed that some students and faculty will need help using the system, so technical support staff will be available to resolve issues quickly. | Lee, M. (2021). *Support Systems for Online Learning Platforms*. EdTech Solutions. |
| All Students Have Reliable Internet Access | It is assumed that all students and faculty members have access to a stable internet connection, as the LMS will require consistent online access to function properly. | Smith, R. (2020). *Challenges in Online Learning*. Global Tech Journal. |

## Limitations

| **Limitation** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Compatibility with Older Devices | The system may have compatibility issues with older devices and browsers, limiting the user experience for some students using outdated technology. | Walker, H. (2019). *Device Compatibility in Online Education Systems*. Tech Review. |
| Limited Initial Budget | The initial development of the LMS must be done within a limited budget, which may restrict some advanced features or functionalities from being implemented in the first phase. | Turner, G. (2020). *Cost Constraints in LMS Development*. Education Technology Finance. |