# CS 255 Module Two Assignment Template

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## Functional Requirements

| **Functional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
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| Analytics of the system | The LMS must provide reports and analytics on student activities, performance, and progress, to enable instructors and administrators to make decisions and improve the quality of learning. This requirement is crucial for assessment and evaluation, as well as for the continuous improvement of the learning platform. | J. L. Mapp et al., 2019 |
| Communication throughout the system | The system must have tools for communication and collaboration, such as email, chat, and discussion forums, to facilitate interaction among users. This requirement is necessary for promoting engagement, feedback, and social presence in online learning. | Alazemi, B. F., Almutairi, I. L. F. H., & Almutairi, F. L. F. H. (2021). Learning Management Systems (LMS) and Future Vision. Ilkogretim Online, 20(4), 769–774. |
| Methods of assessment | The platform must support various forms of assessments, including objective and subjective questions, rubrics, and grading scales. This requirement is critical for the evaluation of students' learning outcomes and the improvement of instructional strategies. | E. C. Alade & A. O. Adebowale, 2019) |
| Course Management | The learning system must have the ability to manage multiple courses with customizable settings and features, including course descriptions, assignments, quizzes, and discussions. This requirement is necessary because an LMS platform offers diverse courses, and each course has different requirements and needs. | J. Yan & M. Lee, 2020 |
| Provide Accessibility. | The learning platform must adhere to accessibility standards to ensure that users with disabilities can access and use the system effectively. This requirement is essential for promoting inclusivity and equity in education. | D. A. Fichten et al., 2018 |
| User Management of the Platform. | The LMS must provide various levels of access to users, including administrators, instructors, and students, with unique features for each role. This requirement is important because each user has different responsibilities and permissions. The learning platform must provide a secure and efficient platform for user management. | R. M. Osterhout, 2020 |

## Nonfunctional Requirements

| **Nonfunctional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
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| Usability. | The system must be user-friendly, intuitive, and easy to navigate, with clear instructions and feedback, ensuring that users can use it efficiently and effectively. | P. S. Sathish Kumar & R. Radhakrishnan, 2021 |
| Platform reliability. | The LMS must be available and responsive 24/7, with minimal downtime and fast loading times, to ensure that users can access and use it anytime and anywhere. This requirement is.  critical for user trust and confidence in the system. | M. E. Hardaker & A. Shah, 2021 |
| System Security. | The LMS must have robust security measures, such as authentication, authorization, encryption, and intrusion detection, to protect user data and prevent unauthorized access or attacks. | Alazemi, B. F., Almutairi, I. L. F. H., & Almutairi, F. L. F. H. (2021). Learning Management Systems (LMS) and Future Vision. Ilkogretim Online, 20(4), 769–774. https://doi-org.ezproxy.snhu.edu/10.17051/ilkonline.2021.04.81 |
| Platform Scalability. | The system must be able to manage many users and courses, with no significant degradation in performance or functionality, to accommodate the growth of the LMS, the University, and its user base. This requirement is necessary for futureproofing and cost-effectiveness. | M. F. Mubarak et al., 2019 |
| Cross-platform operability. | The LMS must be able to integrate with other systems and technologies, such as student information systems and databases to enhance its functionality and compatibility. | J. Xu et al., 2021 |
| Speed of Platform. | Speed determines how fast an application responds to commands. Speed also involves assessing a system's ability to manage an increasing workload as you use different applications at the same time. (“9 Nonfunctional Requirements Examples | Indeed.com”) | Khiat, H., & Vogel, S. (2022). A self-regulated learning management system: Enhancing performance, motivation, and reflection in learning. (“A self-regulated learning management system: Enhancing performance ...”) Journal of University Teaching & Learning Practice, 19(2), 43–58. https://doi-org.ezproxy.snhu.edu/10.53761/1.19.2.4 |

## Assumptions

| **Assumption** | **Rationale for Requirement** | **Source(s), APA format** |
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| The course structure is necessary. | Knowledge is delivered effectively in a discrete, time-bound, linear set of experiences known as “courses.” | Cole. Aug 9, 2019. Source www.medium.com |
| Standards of learning are necessary. | Adoption of an enterprise LMS will require some standardization of teaching and learning as all available functionality is provided by the system. | Luck, Jones et al. 2004. |

## Limitations

| **Limitation** | **Rationale for Requirement** | **Source(s), APA format** |
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| Systems are not customizable. | "Current LMS are not customizable for instruction aimed at a specific audience with specific content." (“LMS characteristics and limitations – Some assemblage required”) | Black, Beck et al. 2007. |
| The course structure is too rigid. | The course focus on most LMS makes it difficult to support communities of students outside of the course structure or to involve non-course participants in online courses | Beer and Jones, 2008. |