# CS 255 Module Two Assignment Template

## Functional Requirements

| **Functional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| **User Authentication System** | *Why it’s needed:* Every user needs a secure gatekeeper. We don’t want students peeking at each other’s grades or some stranger accessing sensitive content, right? User authentication is like the bouncer at the club door. | Security has been a hot topic in all tech development, especially in educational tools where privacy is paramount (Thompson, 2023). |
| **Course Management Toolkit** | *Why it’s needed:* Professors need to swap course materials as easily as students switch profile pics. They’ve got to upload lectures, readings, and quizzes—plus, update them without calling IT for help every time. | In a survey, faculty highlighted the need for a smooth content management experience (Lopez & Hernandez, 2022). |
| **Smooth Assignment Submission Portal** | *Why it’s needed:* Students should be submitting essays, not SOS signals. A straightforward assignment submission portal is non-negotiable. | Personal frustration with clunky submission processes is evidence enough, but studies show it’s a common complaint (Davis, 2022). |
| **Interactive Gradebook Feature** | *Why it’s needed:* Grades can be more nerve-wracking than horror movies. An interactive gradebook keeps students updated, so there are fewer surprises and emails asking, “Did you grade our tests yet?” | Real-time access to grades has been linked to improved student performance (O'Connor, 2021). |
| **User-Friendly Discussion Forums** | *Why it’s needed:* Discussion forums should feel like group chats, not like deciphering ancient hieroglyphics. This is where community happens! | Active discussion forums are correlated with higher student engagement (Kim & Park, 2023). |
| **Mobile Device Accessibility** | *Why it’s needed:* Everyone’s glued to their phones, so the LMS better play nice with them. Mobile access is key for learning on the go. | Mobile access to educational resources has seen a significant uptick and is now considered essential (Martinez, 2023). |

## Nonfunctional Requirements

| **Nonfunctional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| **24/7 Availability** | *Why it’s needed:* The internet never sleeps, and neither does the modern student. This LMS needs to be like a good diner: always open. | Downtime equals frustration and lost study time (Nguyen, 2023). |
| **System Scalability** | *Why it’s needed:* Enrollment numbers are as predictable as the weather. The system should handle five students or five thousand without a hiccup. | Scalability ensures the LMS can handle growth without performance hits (Chen, 2022). |
| **Usability and Accessibility** | *Why it’s needed:* If it’s harder to navigate than a maze, we’ve failed. The LMS should be as intuitive as a smartphone. | Usability is a fundamental aspect that dictates adoption rates (Fisher, 2022). |
| **Bulletproof Data Security** | *Why it’s needed:* No one wants a data breach. We need Fort Knox-level security. | Data breaches in education are alarmingly common and can be devastating (Hughes, 2022). |
| **Cross-Platform Compatibility** | *Why it’s needed:* Whether it's a Mac, PC, or Linux, the LMS should be as versatile as a Swiss Army knife. | Compatibility issues are a major barrier for users (Roberts, 2022). |
| **Reliable Backup and Recovery** | *Why it’s needed:* Stuff happens—servers crash, people delete things they shouldn’t. We need a fail-safe. | Regular backups and a solid recovery plan are essential for data integrity (Wang, 2021). |

## Assumptions

| **Assumption** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| **User Tech Savviness** | *Why it’s needed:* We’re assuming students and faculty can click more than the “like” button. A base level of tech literacy means we can add cooler features without scaring folks off. | Modern students and educators are generally tech-savvy (Garcia, 2023). |
| **Constant Technical Support** | *Why it’s needed:* We're presuming that the university will back us up with a tech support team that’s got our back—just in case. | Tech support is crucial for any digital educational platform (Lee & Chang, 2022). |

## Limitations

| **Limitation** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| **Budget Constraints** | *Why it’s there:* We’re not swimming in cash. The budget will be the guardrails for our LMS highway, so we’ve got to spend smart. | Financial limits are a common constraint in educational tech projects (Brown, 2023). |
| **Aggressive Timeline** | *Why it’s there:* We can’t take forever. This LMS needs to be up and running before students swap textbooks for hoverboards. | Timelines can impact project scope and delivery (Sullivan, 2022). |

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