# CS 255 Module Two Assignment Template

## Functional Requirements

| **Functional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| New User Registration | There needs to be a way to create new users for the system to conform to the natural flow of students into and out of the college. |  |
| Student Course Management | Students of a class need to have a way of interacting with the material provided in the LMS that is distinct from instructors and administrators. | Fenton, W. (2018, January 12). The best (LMS) learning management systems. PCMAG. Retrieved November 5, 2022, from <https://www.pcmag.com/picks/the-best-lms-learning-management-systems>  Blackboard learn vs Canvas. Blackboard Learn vs CANVAS - 2022 Comparison - Software Advice. (n.d.). Retrieved November 5, 2022, from <https://www.softwareadvice.com/lms/blackboard-learn-profile/vs/canvas-instructure/>  Feature Guide for the Blackboard App. (n.d.). Retrieved November 5, 2022, from <https://help.blackboard.com/Blackboard_App/Feature_Guide> |
| Instructor Course Management | Instructors of a class need to have a way of interacting with the material provided in the LMS that is distinct from students and administrators. |
| In-App Messaging Option | Seamless methods of communication are helpful for the student’s learning experience. Providing and encouraging the use of a standard prevents students having to rely on third-party software not controlled by the university. |
| Seamless Tool Integration | There will be needs for different tools based on the class subject. Integration is important for classroom engagement, as it cuts down on the amount of time students and instructors need for troubleshooting. |
| Shared & Personal Calendars | Calendars that show deadlines that pertain to a particular student, as well as pertaining to a particular class, and the university as a whole need to be easy to access. |

## Nonfunctional Requirements

| **Nonfunctional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
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| (Operational) LMS is usable across different platforms | We make no such assumption that students and instructors will use the same device, browser, and operating system. |  |
| (Operational) LMS is cloud based | Cloud based is cheaper than native hosting and easier to update. | What does cloud-native mean vs. cloud-hosted? Engineering.com. (n.d.). Retrieved November 5, 2022, from https://www.engineering.com/story/what-does-cloud-native-mean-vs-cloud-hosted |
| (Performance) UI is intuitive and simple to navigate | User interface should follow the Eight Golden Rules at minimum. | Shneiderman, B. (n.d.). The Eight Golden Rules of Interface Design [web log]. Retrieved November 5, 2022, from https://www.cs.umd.edu/users/ben/goldenrules.html. |
| (Security) Establish hierarchy of users | There will be a variety of different users, such as but not limited to: administrator, help desk analyst, instructor, student, teaching assistant. Each of these users will have different access to different things, as they will have different needs. |  |
| (Security) Single Sign On | SSO promotes learning enrichment by streamlining the use of third-party tools. Instructors spend more time teaching the material and less time troubleshooting login issues. | Nadel, B. (2017). When Software COOPERATES. *District Administration*, *53*(8), 43–45. |
| (Political) Grade disclosures follow FERPA requirements | Compliance with law is critical for a higher education institution because there will be a mixture of “dependent” status among the student population. | *Ferpa*. FERPA | Protecting Student Privacy. (n.d.). Retrieved November 5, 2022, from https://studentprivacy.ed.gov/ferpa#0.1\_se34.1.99\_112 |

## Assumptions

| **Assumption** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Students and instructors are capable of operating a device to access the LMS. | While internet-capable devices seem ubiquitous today, there exists communities throughout the country that lack the infrastructure for high-speed internet access. Making this assumption acknowledges this fact, establishes the necessity for devices and reliable internet access, while noting that the problems associated with this requirement are outside the scope of the project. | Koricich, A., Tandberg, D., Bishop, B., & Weeden, D. (2020). Doing the Same (Or More) with Less: the Challenges Regional Public Universities Face in Serving Rural Populations. *New Directions for Higher Education*, *190*, 59–70. <https://doi.org/10.1002/he.20367> |
| Student data shared with third parties will be handled with care. | Data surveillance and the potential for leaks is a growing concern for cloud-based Learning Management Systems. Making this assumption acknowledges these concerns while declaring that these concerns are outside the scope of the project. | Marachi, R., & Quill, L. (2020). The Case of Canvas: Longitudinal Datafication through Learning Management Systems. *Teaching in Higher Education*, *25*(4), 418–434. <https://doi.org/10.1080/13562517.2020.1739641> |

## Limitations

| **Limitation** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Budget | Every project is limited by a budget. |  |
| Deliverables need to be available in advance of next class enrollment period. | It is not wise to change systems in the middle of a semester. Consistency is important. | Shneiderman, B. (n.d.). The Eight Golden Rules of Interface Design [web log]. Retrieved November 5, 2022, from https://www.cs.umd.edu/users/ben/goldenrules.html. |