# CS 255 Module Two Assignment Template

## Functional Requirements

| **Functional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Must have the ability for students to log into their account and see each class they are currently enrolled in as well as the two previous courses (if applicable) | I chose this requirement because users need to be able to have their classes, whether it be for students or for instructors, organized. Users will participate in multiple courses, which are accessed by this system, and the information for each course needs to be accessible in an organized and efficient manner. Click a link to access one course, click a link to access a different course, etc. Also, users may want to be able to access old information; therefore, previous courses should be made accessible here as well. |  |
| The system must be able to provide a method for students and professors to communicate through a weekly discussion board. It should keep track of what user posts which messages both when creating new threads and when responding to peers. | There exist requirements for participation in classes for students and instructors to actively participate and communicate with each other about various topics covered. One way this participation is measured is by engaging with peers through an online discussion board where students create posts in response to a particular topic, then peers, including instructors, respond appropriately to each other in a collaborative effort. The LMS needs to be the central hub for this communication; this way, the collaboration can be measured and seen by the entire class and documented accordingly. |  |
| The system should have a general announcements area where the instructor is able to communicate important messages to the class. The announcements section should be in a high-visibility area once students log in. | This is critical for instructors to easily communicate information to the entire class without having to send out individual messages |  |
| The system should alert users when new information has been updated in their courses. | This is beneficial for users to be made aware of information changes, such as when a grade has been updated or when a peer responds to a discussion post in which the user is actively engaged. Also, if the instructor makes an announcement that could contain critical information regarding any component of a class, the user can be made aware of the announcement by a highly visible notification in an area of the user interface. |  |
| The system should track users’ progress in each of their courses. | I chose this because, for me, and I am sure for many others, I like to see my progress as classes move forward. I like to know how I am doing, not just grade-wise but also how much work I have left to complete each week. I want the system to be able to tell me how much time I have spent working on items and, at times, show me statistical data that can provide me insight as to how well I am doing in the class compared to the rest of the class. |  |
| The system should provide a method for accessing additional resources. | I added this requirement because we want the system to provide access to additional resources that a university may offer, which can benefit students who may be struggling with certain areas of their work. Sometimes students may forget what resources they may have available to them, and having an area of the system/user interface dedicated to resources can be a friendly reminder of how to get help. This can include tutoring or peer review as well as accessibility resources, etc. |  |

## Nonfunctional Requirements

| **Nonfunctional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
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| The system must have the ability to be accessed by a web browser of the user’s choice. | Because the system is an online learning environment, it must be accessible anywhere in an online environment. | (Dennis et al., 2012) |
| The system must be highly secure. | Due to the academic nature of the system, the system must be highly secure to ensure that users’ information is protected and not accessible by unauthorized individuals. | (Dennis et al., 2012) |
| The system should refresh any changes made every time the user clicks any link while they are logged in. | For instance, if the student was actively participating in a discussion, they need to be able to see when other users post or make updates to the discussion board. |  |
| The system must have the ability to handle any number of users at the same time. | As online schools continue to evolve over time, more and more people are choosing to take classes online because of the flexibility in scheduling it affords and many other reasons. Because of this, and SNHU is a great example, LMSs are handling more and more users each year. The system needs to be able to handle as many users as possible so that the school can continue its expansion with its online presence and be able to handle such expansion as it occurs. |  |
| The system should be available 24 hours a day, 7 days a week. | Because the learning environment is catered to students who need flexibility in their schedules, the system must be accessible constantly. Also, students/instructors depend on the system to function when it is convenient for them., not the other way around. If a student is working on a paper last minute and needs to submit it before a 12:00 a.m. deadline, the system needs to be functioning for this or any situation that can occur 24/7. |  |
| The system should be easy to learn/understand/use. | Because the system being designed is for academic purposes, users should not be complicated by the system itself. It should be simple to navigate and understand in a very straightforward fashion so that users can spend more time completing work rather than navigating and using the system. For example, If a student needs to submit an assignment quickly, they should be able to access the system component that enables them to submit assignments with minimal, if any, delay. | (*Nonfunctional Requirements, n.d.)* |

## Assumptions

| **Assumption** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| The university will provide all resources, class materials/course requirements on time for all users/ available courses. | I chose this because it is assumable that because the university is selling/providing a means for online education and enrolling/scheduling students and instructors to learn and teach using this system, the university must already be prepared for classes to begin. This includes having already planned an agenda for the class and making all resources available to the system that the students/instructors will be utilizing for the course. | (Usmani, 2022) |
| All equipment is in good condition. | It is assumed that for a system that needs to be fully functional 24/7, all equipment is in good condition. Any other assumption would mean that the system is not capable and needs improvements to ensure the system will work at its desired state. If a system is going into the implementation phase, it must be assumed that the system is prepared. | (Usmani, 2022) |

## Limitations

| **Limitation** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Budget – Limited to minimal-sized team. | Because the system should be a fairly simple system to manage, it should not require the use of a large team to maintain and, therefore, would need to operate under the limitation of a budget constraint. Meaning if I employ five people to manage the system when only two or three are needed, I am ultimately costing the client more money, taking away from their bottom line when it is completely unnecessary. | (Usmani, 2022) |
| Time – Must be operational by the scheduled start of classes. | The system must be functional before classes begin. If the university is enrolling students and assigning instructors to classes, the system must be in operation by that time. Also, time needs to be measured realistically as well. If the system is going to take a month to be designed, then the university should be fully aware of how long the system design will take before it can be implemented. It would be bad business practice to schedule classes that aren’t ready to be scheduled on a system that is not ready to be launched. If changes in the time frame occur, they should be communicated immediately. | (Usmani, 2022) |

**References**

Dennis, A., Wixom, B. & Tegarden, D. (2012). *CHAPTER 3: REQUIREMENTS DETERMINATION* | Systems

Analysis and Design with UML, 4th Edition.

*Nonfunctional Requirements*. Users. <http://users.csc.calpoly.edu/~jdalbey/SWE/QA/nonfunctional.html>

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