

4. Functional Requirements

NOTE: The functional requirements is based on the system requirements specification mentioned in section 3.

4.1 Priority procedure

The priority of the functional requirements is based on a scale of 1 to 5 according to the table below.

Priority Number	Priority	Semantics
1	High / Critical	A critical requirement without which system is not acceptable to the stakeholders.
2	Medium / Important	A necessary requirement that can be implemented only after all priority 1 requirements are implemented.
3	Medium / Not Important	A necessary but deferrable requirement which makes the system less usable but still functional.
4	Low / Desirable	A nice feature to have but the system functions well without it.
5	If time permits	A requirement which can be implemented only if time permits at the end of the semester.

Table 10: Functional req – Priority procedure

4.2 Authentication

Identifier	Priority	Requirement
REQ-1	1	Each user (administrator, professor, student) shall be uniquely identified by his or her eight-digit ID number.
REQ-2	1	The system shall use secured password generated using MD5 hashing algorithm.
REQ-3	1	The system shall authenticate the user login credentials from his or her user id and password.
REQ-4	5	The system shall use 2FA (2-Factor Authentication) to authenticate users.

Table 11: Functional req - Authentication

4.3 Authorization

Identifier	Priority	Requirement
REQ-5	1	The system shall authenticate users to their respective profile and environment view.
REQ-6	1	The system shall enable authenticated users access the school network.
REQ-7	1	The system shall prevent unauthenticated users access from the school network.
REQ-8	2	The system shall keep a log of all authenticated users who are accessing the school network.
REQ-9	5	The system shall keep a log of all attempts of unauthenticated users to access the school network.
REQ-10	5	The system shall send a notification to the administrator if an unauthorized access has been attempted by an unauthenticated user.

Table 12: Functional req – Authorization

4.5 Archiveration

4.4 Logging Out

Identifier	Priority	Requirement
REQ-11	1	The system shall allow users to log out from the school network without losing any saved data.

Table 13: Functional req – Logging Out

4.5 Maintaining registered Professors and Students list

Identifier	Priority	Requirement
REQ-12	1	The system shall allow an administrator to add registered Professors to the school network.
REQ-13	1	The system shall allow an administrator to delete registered Professors from the school network.
REQ-14	1	The system shall allow an administrator to add registered students to the school network.
REQ-15	1	The system shall allow an administrator to delete registered students from the school network.

Table 14: Functional req – Maintaining registered list

4.6 Professor course registration – courses to be taught

Identifier	Priority	Requirement
REQ-16	1	The system shall allow a professor to add the course(s) to be taught for the current semester's offering. <i>admin</i>
REQ-17	1	The system shall allow a professor to remove selected course(s) from the current semester's offering. <i>admin</i>
REQ-18	1	The system shall display the days and times for the course(s) being offered.
REQ-19	2	The system shall display the current semester start and end dates.
REQ-20	2	The system shall display the instruction mode for the course(s) being offered.
REQ-21	2	The system shall display the room location for the course(s) being offered.

Table 15: Functional req – Professor course registration

4.7 Professor course view environment

Identifier	Priority	Requirement
REQ-22	1	The system shall allow a professor to view the list of registered students for a selected course.
REQ-23	1	The system shall allow a professor to send announcements to the list of registered students for a selected course.
REQ-24	1	The system shall allow a professor to grade students assignments for a selected course.
REQ-25	2	The system shall allow a professor to add a syllabus for the course being taught in the current semester.
REQ-26	3	The system shall allow a professor to receive and read messages from registered students for a selected course.
REQ-27	3	The system shall allow a professor to send messages to a registered student in a selected course.
REQ-28	5	The system shall allow a professor to receive file attachment from students.

Table 16: Functional req – Professor course view

4.8 Professor course view environment

Identifier	Priority	Requirement
REQ-29	1	The system shall allow a professor to view the list of registered students for a selected course.
REQ-30	1	The system shall allow a professor to send announcements to the list of registered students for a selected course.
REQ-31	1	The system shall allow a professor to grade students assignments for a selected course.

4.8 Student course registration – courses to enlist

Identifier	Priority	Requirement
REQ-29	1	The system shall allow a student to view courses being offered in the current semester.
REQ-30	1	The system shall display the pre-requisites for each course being offered in the current semester.
REQ-31	1	The system shall display the days and times for each course being offered in the current semester.
REQ-32	1	The system shall display the instructor's name for each course being offered in the current semester. 10
REQ-33	1	The system shall allow a student to register for an available course only when pre-requisites have been satisfied.
REQ-34	1	The system shall allow a student to drop a registered course from the semester's curriculum.
REQ-35	2	The system shall display the instruction mode for each course being offered in the current semester.
REQ-36	2	The system shall inform a student if a pre-requisite is not met for a selected course.
REQ-37	2	The system shall inform a student two or more selected courses have conflicting time schedule.
REQ-38	2	The system shall display the number of seats available for each course being offered in the current semester.
REQ-39	2	The system shall not allow a student to register for a course if there are no available seats left.

Table 17: Functional req – Student course registration

4.9 Student course view environment

Identifier	Priority	Requirement
REQ-40	1	The system shall allow a student to view the list of courses that he has registered for the current semester.
REQ-41	1	The system shall allow a student to view his or her current grade for a selected registered course.
REQ-42	1	The system shall allow a student to receive and view announcements from a professor of a registered course in the current semester.
REQ-43	2	The system shall allow a student to view the syllabus of a selected registered course.
REQ-44	3	The system shall allow a student to send messages to the professor of a selected registered course.
REQ-45	3	The system shall allow a student to submit an assignment for a selected registered course.
REQ-46	5	The system shall allow a student to send file attachments to a professor of a selected registered course.

Table 18: Functional req – Student course view