

Business Requirement Document

[Software Product Name]

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1 INTRODUCTION

This document defines the objectives of the **Educational Academy in KSA** to implement a comprehensive **Digital Learning and Student Management System** to enable **online course registration, learning management, parental approval workflows, and marketing engagement**, while providing **real-time analytics, notifications, and a unified student experience across web and mobile platforms**.

1.1. SITUATION STATEMENT

The current student registration and learning management processes at the **Educational Academy in KSA** are **fragmented, largely manual, and lack integration across systems**. Students face difficulties in **course registration, parental approvals are delayed**, and engagement with **marketing content is minimal**.

Has the effect of:

- High bounce rates during course registration.
- Delays in parental approvals, leading to incomplete enrollments.
- Limited visibility of courses and low student engagement with available content.
- Inconsistent student and instructor data across platforms.

With the impact of:

- Reduced enrollment and participation rates in courses.
- Inefficient administrative processes, consuming more staff time.
- Difficulty in tracking student progress and performance.
- Lower overall satisfaction for students, parents, and instructors.

referenced documents

The BRD references and is written with compliance to the following documents:

- Glossary
- Stakeholder Register
- Capability Table
- Product Roadmap

1.2. SCOPE

Core

- **Web Portal:** The main interface for students, parents, and visitors to browse courses, manage accounts, and access personalized dashboards. Enhances student registration experience and centralizes access to all educational services.
- **Approval Workflow (SIS):** Automated workflow for course registration approvals, parental consent (<14 years), and enrollment tracking. Ensures compliance with regulatory requirements and reduces manual administrative tasks.

Supporting

- **CMS (Content Management System):** Enables content developers or CMS Admin to dynamically create, edit, and publish news, blogs, announcements, and featured courses. Supports push notifications, marketing campaigns, and recommendations.

- **Backoffice / Administration:** Authorized roles (Admin, CMS Admin, LMS Admin) configure, manage, and synchronize data prerequisites required for smooth operation of the core functionalities.

Generic

- **Moodle LMS:** Provides the e-learning platform for students and instructors, supporting materials, assignments, quizzes, attendance tracking, evaluation, and reporting.
- **Mobile App (iOS / Android):** Provides students and instructors access to courses, notifications, community, and dashboards on mobile devices.
- **SEO & Analytics:** Ensures the website is optimized for search engines and integrates with Google Analytics to track traffic, engagement, and campaign effectiveness.

Future / Optional

- **Payment Gateway:** Supports online payment, subscriptions, invoices, and refunds for paid courses in future phases.

Out of Scope

- Data exchange with currently running systems other than those specified in the Integration requirements section 4.1.2.
- Importing historical data from legacy sources.
- Customization of external systems outside the defined solution components.

2 BUSINESS REQUIREMENTS

This section covers the high-level business goals and objectives that provide the rationale for building the solution.

TABLE 1: BUSINESS REQUIREMENTS

ID	Requirement	Description
BR.1	Web Portal & Course Registration	The solution shall provide a guided, structured, and user-friendly online course registration workflow for students, including course selection, form validation, and enrollment tracking.
BR.2	Learning Management & Digital Learning	The solution shall implement a Learning Management System (LMS) integrated with SSO, enabling students and instructors to access learning materials, submit assignments, track attendance, and manage grades.
BR.3	Student Information System (SIS) & Approval Workflow	The solution shall provide a Student Information System (SIS) with automated workflows, parental approval for students

ID	Requirement	Description
		under 14, unified student profile, and role-based access control (RBAC).
BR.4	Content Management System (CMS) & Marketing	The solution shall offer a CMS for dynamic course catalogues, marketing content, bilingual support, branding consistency, SEO optimization, and social media integration.
BR.5	Mobile App & Personalization	The solution shall provide a mobile application allowing students and instructors to access LMS content, receive notifications, manage personalized dashboards, and interact with marketing updates and live events.
BR.6	Payment Gateway & Monetization	The solution shall integrate an online payment gateway to support multiple payment methods, subscriptions, and refunds for future paid courses.
BR.7	Analytics & Reporting	The solution shall provide reporting and analytics capabilities (e.g., Google Analytics) to track engagement, registrations, course popularity, and system performance for informed decision-making.
BR.8	Compliance & Security	The solution shall ensure compliance with national regulations (NAFATH, NELC), enforce secure data storage and transmission, role-based access, and ID verification during registration.

3 NONFUNCTIONAL REQUIREMENTS

TABLE 2: NONFUNCTIONAL REQUIREMENTS

ID	Requirement	Description	Priority
NFR.1	Performance / Response Time	The system shall ensure page load times of <3 seconds for 100 concurrent users and <5 seconds for	High

ID	Requirement	Description	Priority
		200 concurrent users, including smooth registration workflow.	
NFR.2	Scalability	The system shall support up to 20,000 concurrent users and handle peak registration periods without degradation.	High
NFR.3	Security	The system shall comply enforce role-based access control, support NAFATH ID verification, and encrypt all sensitive data in storage and transmission.	High
NFR.4	Compatibility	The system shall be compatible with modern browsers (Chrome, Firefox, Edge, Safari) and mobile devices, and integrate with Google Analytics and MS Office export functionality.	High
NFR.5	Accessibility / Usability	The system shall follow WCAG 2.1 AA accessibility standards, provide bilingual interface (Arabic/English), and offer intuitive navigation and branding.	High
NFR.6	Availability / Reliability	The system shall provide 99.9% uptime, automatic failover, and daily backups.	High
NFR.7	Maintainability	The system shall provide CMS for marketing, modular workflow management in SIS, and modular system design to enable future enhancements.	Low
NFR.8	Data Integrity	The system shall maintain a single source of truth, prevent duplicate entries, and synchronize data across LMS, SIS, and Web Portal.	High
NFR.9	Compliance / Regulatory	The system shall comply with National eLearning Center regulations, unified student profiles, and parental approval workflows for students under 14.	High

ID	Requirement	Description	Priority
NFR.10	Analytics / Monitoring	The system shall integrate with Google Analytics to track engagement, registrations, and course popularity, and provide dashboards for marketing and admin staff.	Low
NFR.11	Data Backup & Recovery	The system shall perform daily backups with a Recovery Time Objective (RTO) of 2 hours.	High
NFR.12	Mobile Support	The system shall support iOS and Android mobile platforms for students and instructors.	High
NFR.13	Single Sign-On (SSO)	Users shall authenticate once and gain access to Web Portal, LMS, and Mobile App without repeated logins.	High
NFR.14	Two-Factor Authentication (2FA)	The system shall enforce 2FA for secure login, requiring a one-time password (OTP) in addition to user credentials.	High
	Branding consistency		

4 FUNCTIONAL REQUIREMENTS

<For a more detailed BRD, document the use case of each requirement>

4.1. REQUIREMENT CATEGORY 1

TABLE 3 : USER ACCOUNT MANAGEMENT

ID	Requirement	Description	Business Requirement	Priority
FR.1	Create new account	The system shall allow students to create a new account.	BR.1: Web Portal & Registration	High
FR.2	Verify student identity (NAFATH)	The system shall verify student identity using NAFATH authentication.	BR.1	High
FR.3	NAFATH data sync	NAFATH sends student info to the system.	BR.1	High
FR.4	Verify student number (OTP)	The system shall verify student number using SMS OTP.	BR.1	High
FR.5	Secure login	The system shall support secure login via SSO.	BR.1	High
FR.6	Language selection	The system shall allow users to choose language (AR/ENG).	BR.1	Medium
FR.7	Registration decision notification	The system shall notify student if approved or rejected.	BR.1	High
FR.8	Create web profile	The system shall create web profile for student if approved.	BR.1	High
FR.9	Profile management	The system shall support profile management (update personal info, contact details, etc.).	BR.1	Medium

4.2. REQUIREMENT CATEGORY 1

TABLE 4 : COURSE CATALOG & SEARCH

ID	Requirement	Description	Business Requirement	Priority
FR.10	View marketing content	The system shall allow web visitors to view marketing content (news, blogs, announcements, live streaming).	BR.1	Medium
FR.11	Course catalog browsing	The system shall provide a browse, search, and filter course catalog.	BR.1	High
FR.12	View course details	The system shall allow viewing of course details (category, instructor, duration, start date).	BR.1	High
FR.13	Display course info	The system shall display detailed course information (syllabus, prerequisites, capacity, instructor).	BR.1	High

4.3. REQUIREMENT CATEGORY 1

TABLE 5 : COURSE ENROLLMENT WORKFLOW

ID	Requirement	Description	Business Requirement	Priority
FR.14	Guided enrollment workflow	The system shall provide a guided step-by-step registration workflow.	BR.1	High
FR.15	Course registration form	The system shall display course registration form for student to fill out.	BR.1	High
FR.16	Validate prerequisites	The system shall validate prerequisites and eligibility (e.g., age, academic history).	BR.1	High

ID	Requirement	Description	Business Requirement	Priority
FR.17	Enforce parental approval	The system shall enforce parental approval for students under 14 if required.	BR.1	High
FR.18	Check seat availability	The system shall check seat availability before confirming registration.	BR.1	High
FR.19	Confirmation receipt	The system shall generate a confirmation receipt after successful registration.	BR.1	High
FR.20	Registration modification	The system shall allow cancellation or modification of registration before deadline.	BR.1	Medium

4.4. REQUIREMENT CATEGORY 1

TABLE 6: PAYMENT & MONETIZATION (IF APPLICABLE FOR PAID COURSES)

ID	Requirement	Description	Business Requirement	Priority
FR.21	Payment integration	The system shall integrate with a payment gateway to process course fees.	BR.1	High
FR.22	Multiple payment methods	The system shall support multiple payment methods (credit card, Mada, etc.).	BR.1	High
FR.23	Refunds & failed payments	The system shall handle refunds or failed payments according to policies.	BR.1	Medium

4.5. REQUIREMENT CATEGORY 1

TABLE 7: STATUS TRACKING & NOTIFICATIONS

ID	Requirement	Description	Business Requirement	Priority
FR.24	Track enrollment status	The system shall allow students to track enrollment and approval status in real-time.	BR.1	High
FR.25	Enrollment notifications	The system shall send notifications (email/SMS/in-app) for enrollment confirmation, pending approvals, or rejection.	BR.1	High
FR.26	Deadline reminders	The system shall remind students about upcoming enrollment deadlines.	BR.1	Medium
FR.27	Accessibility & localization	The portal shall support multi-language UI (Arabic/English).	BR.1	High

4.6. REQUIREMENT CATEGORY 2

TABLE 8: AUTHENTICATION & ACCESS

ID	Requirement	Description	Business Requirement	Priority
FR.1	SSO authentication	The LMS shall support Single Sign-On (SSO) for students, integrated with the Web Portal.	BR.2: LMS & Digital Learning	High
FR.2	Student profile management	The LMS shall allow students to manage their LMS profile (update personal info, preferences, etc.).	BR.2	Medium

ID	Requirement	Description	Business Requirement	Priority
FR.3	Instructor account creation	The LMS shall create instructor accounts automatically and send login link/instructions to instructors.	BR.2	High
FR.4	Instructor profile management	The LMS shall allow instructors to manage their LMS profiles.	BR.2	Medium
FR.5	Account management	The LMS shall manage both student and instructor accounts.	BR.2	High
FR.6	Community management	The LMS shall manage members in online communities (discussion groups, forums).	BR.2	Medium
FR.7	Instructor access to student profiles	The LMS shall allow instructors to view profiles of students enrolled in their courses.	BR.2	High
FR.8	Role-based access control	The LMS shall provide secure, role-based access for students, instructors, and admins.	BR.2	High
FR.9	SIS profile synchronization	The LMS shall synchronize user profiles with the SIS to ensure consistent and accurate data.	BR.2	High

4.7. REQUIREMENT CATEGORY 2

TABLE 9: COURSE DELIVERY & LEARNING MATERIALS

ID	Requirement	Description	Business Requirement	Priority
FR.10	Upload & organize materials	The LMS shall allow instructors to upload and organize course materials (docs, videos, slides).	BR.2: LMS & Digital Learning	High
FR.11	Student access to materials	The LMS shall provide students with access to learning materials anytime via web and mobile.	BR.2	High
FR.12	Assignments & exams	The LMS shall allow students to upload assignments, take quizzes, and complete exams online.	BR.2	High
FR.13	Grade access	The LMS shall allow students to view their grades for assignments, quizzes, and exams.	BR.2	High
FR.14	Performance tracking	The LMS shall allow students to track their attendance and overall performance.	BR.2	Medium
FR.15	Multi-language support	The LMS shall support multi-language course materials (Arabic/English).	BR.2	Medium
FR.16	Instructor upload verification	The LMS shall validate that instructors have uploaded required materials for each course.	BR.2	High

4.8. REQUIREMENT CATEGORY 2

TABLE 10: ASSIGNMENTS, QUIZZES & EXAMS

ID	Requirement	Description	Business Requirement	Priority
FR.17	Create assessments	The LMS shall allow instructors to create assignments, quizzes, and exams.	BR.2: LMS & Digital Learning	High
FR.18	Grade assessments	The LMS shall enable instructors to grade assignments, quizzes, and exams.	BR.2	High
FR.19	Track attendance	The LMS shall allow instructors to track and record student attendance.	BR.2	Medium
FR.20	Enforce deadlines	The LMS shall enforce deadlines and lock submissions after due dates.	BR.2	High

4.9. REQUIREMENT CATEGORY 2

TABLE 11: PROGRESS TRACKING & REPORTING

ID	Requirement	Description	Business Requirement	Priority
FR.21	Student dashboards	The LMS shall display student progress dashboards (completed, in progress, pending).	BR.2: LMS & Digital Learning	High
FR.22	Instructor monitoring	The LMS shall allow instructors to monitor student engagement and performance.	BR.2	High
FR.23	Certificates	The LMS shall generate course completion certificates automatically.	BR.2	Medium

ID	Requirement	Description	Business Requirement	Priority
FR.24	Analytics	The LMS shall provide analytics (grades distribution, dropout rates, participation rates).	BR.2	High

4.10. REQUIREMENT CATEGORY 2

TABLE 12: MOBILE LEARNING

ID	Requirement	Description	Business Requirement	Priority
FR.25	Mobile access	The LMS shall provide mobile access (iOS/Android) with synchronized data.	BR.5: Mobile App & Personalization	High
FR.26	Offline access	The LMS shall support access for downloaded materials.	BR.5	Medium
FR.27	Mobile notifications	The LMS shall send mobile notifications for deadlines, grades, and announcements.	BR.5	High

4.11. REQUIREMENT CATEGORY 3

TABLE 13:ACADEMIC RECORDS MANAGEMENT

ID	Requirement	Description	Business Requirement	Priority
FR.1	Synchronize student records	The SIS shall synchronize student records between SIS and LMS/Web Portal.	BR.3: Unified Student Profile & Approval Workflow	High
FR.2	Receive student data from NAFATH	The SIS will receive student data from NAFATH and check student's age.	BR.8: Compliance & Security	High
FR.3	Collect parental info	The SIS will ask student to enter parent's number & email if student age <14.	BR.3	High
FR.4	Send parental approval	The SIS will send approval request to parent if student age <14 to make student signup.	BR.3	High
FR.5	Update Student Status	The SIS shall update student status when when student sign up waiting, pending, approved, rejected, time out .	BR.3	High
FR.6	Real-time updates	The SIS shall allow real-time updates of student personal and academic data.	BR.3	High
FR.7	Maintain unique IDs	The SIS shall maintain unique student IDs across all integrated systems.	BR.3	High
FR.6	Manage course history	The SIS shall manage student course history.	BR.3	Medium
FR.9	Update academic records	The SIS shall allow update or correction of academic records.	BR.3	Medium

ID	Requirement	Description	Business Requirement	Priority
FR.10	Enforce RBAC	The SIS shall enforce Role-Based Access Control (RBAC) for students, parents, and admins.	BR.3	High
FR.11	Compliance with NELC	The SIS shall comply with NELC (National E-Learning Center) standards for course registration, reporting, and student data.	BR.3	High

4.12. REQUIREMENT CATEGORY 3

TABLE 14: ENROLLMENT & COURSE MANAGEMENT

ID	Requirement	Description	Business Requirement	Priority
FR.12	Auto Update Registration	The SIS shall automatically update student course registration details.	BR.3: Enrollment & Course Mgmt	High
FR.13	Course Form Review	The SIS shall review course form.	BR.3	Medium
FR.14	Prerequisite Enforcement	The SIS shall enforce prerequisites and academic rules before enrollment.	BR.3	High
FR.15	Waitlisting & Seat Allocation	The SIS shall support waitlisting and automated seat allocation.	BR.3	Medium
FR.16	Enrollment Approval/Rejection	The SIS shall approve or reject student enrollments.	BR.3	High
FR.17	Update Student Status	The SIS shall update student status waiting, pending, approved, rejected .	BR.3	High

ID	Requirement	Description	Business Requirement	Priority
FR.18	Parental Approval	The SIS shall send request approval to parent if student age <14 if required.	BR.3	High

4.13. REQUIREMENT CATEGORY 4

TABLE 15: CONTENT MANAGEMENT SYSTEM (CMS)

ID	Requirement	Description	Business Requirement	Priority
FR.1	Content Review & Publishing	The system shall allow admins to review, edit, publish, and archive content.	BR.4: CMS, Marketing & Analytics	High
FR.2	Content Creation	The system shall allow content creators to create (News / Blogs / Announcements/Live Streaming).	BR.4	High
FR.3	Multi-language Content	The system shall support multi-language content publishing (Arabic/English).	BR.4	High
FR.4	Version Control	The system shall provide version control and rollback for content updates.	BR.4	Medium
FR.5	Scheduling Content	The system shall enable scheduling of content publishing (e.g., announcements, banners).	BR.4	Medium
FR.6	Categorization & Tagging	The system shall allow categorization and tagging of content for easy retrieval.	BR.4	Medium

4.14. REQUIREMENT CATEGORY 4

TABLE 16: MARKETING & COMMUNICATION

ID	Requirement	Description	Business Requirement	Priority
FR.7	Targeted Campaigns	The system shall allow targeted email/SMS campaigns for students.	BR.4: CMS, Marketing & Analytics	High
FR.8	Social Media Integration	The system shall integrate with social media platforms for content sharing.	BR.4	Medium
FR.9	Personalized Notifications	The system shall enable personalized notifications based on user profile and behavior.	BR.4	High
FR.10	User Segmentation	The system shall allow segmentation of users for marketing campaigns (by age, location, program).	BR.4	High
FR.11	A/B Testing	The system shall support A/B testing for marketing campaigns.	BR.4	Medium
FR.12	Engagement Metrics	The system shall generate engagement metrics for marketing campaigns.	BR.4	Medium

4.15. REQUIREMENT CATEGORY 4

TABLE 17: GOOGLE ANALYTICS & REPORTING

ID	Requirement	Description	Business Requirement	Priority
FR.13	Google Analytics Integration	The system shall integrate with Google Analytics to track traffic, engagement, and course popularity.	BR.7	High

ID	Requirement	Description	Business Requirement	Priority
FR.14	Reporting & Dashboards	The system shall provide reports and dashboards for monitoring student engagement, content performance, and marketing effectiveness.	BR.7	High
FR.15	Search & SEO Optimization	The system shall support advanced search functionality with filters and keywords.	BR.4	High
FR.16	User Feedback & Surveys	The system shall enable feedback forms and surveys for students and staff.	BR.4	Medium

4.16. REQUIREMENT CATEGORY 5

TABLE 18: MOBILE APP & PERSONALIZATION

ID	Requirement	Description	Business Requirement	Priority
RG.1	Mobile Access for Students	The mobile app shall allow students to access courses, learning materials, assignments, grades, and attendance records.	BR.5	1
RG.2	Mobile Access for Instructors	The mobile app shall allow instructors to upload course materials, assignments, quizzes, and track student performance.	BR.5	1
RG.3	Personalized Dashboard	The mobile app shall provide students and instructors with a personalized dashboard showing saved courses,	BR.5	1

ID	Requirement	Description	Business Requirement	Priority
		recently viewed courses, and important notifications.		
RG.4	Notifications & Alerts	The mobile app shall send push notifications for course alerts, deadlines, marketing updates, and live events.	BR.5	1
RG.5	Integration with Web Portal & CMS	The mobile app shall sync with the website and CMS to reflect updated course content, news, featured courses, and live events.	BR.5	1
RG.6	Multi-language Support	The mobile app shall support Arabic and English for all UI elements, content, and notifications.	BR.5	1
RG.7	Offline Access / Caching	The mobile app shall allow students to download materials and access certain features offline.	BR.5	2
RG.8	Secure Login & Authentication	The mobile app shall support secure login via NAFATH SSO and role-based access control.	BR.8	1

4.17. REQUIREMENT CATEGORY 6

TABLE 19: PAYMENT & MONETIZATION

ID	Requirement	Description	Business Requirement	Priority
RG.1	Online Payment Integration	The solution shall integrate with payment gateways to support multiple online payment methods (credit card, Apple Pay, etc.).	BR.6	1

ID	Requirement	Description	Business Requirement	Priority
RG.2	Subscription Management	The solution shall allow management of subscriptions for paid courses, including renewal and cancellation.	BR.6	2
RG.3	Invoice Generation	The solution shall generate invoices for paid courses and provide receipts to students and parents.	BR.6	2
RG.4	Refund Processing	The solution shall allow processing of refunds for cancelled courses or subscription errors.	BR.6	2
RG.5	Payment Security & Compliance	The solution shall ensure secure storage and transmission of payment data, complying with PCI-DSS standards.	BR.6 / BR.8	1
RG.6	Payment Notifications	The solution shall notify students/parents about successful payments, pending payments, or failed transactions.	BR.6	2

4.18. REPORTING AND ANALYSIS REQUIREMENTS

TABLE 20: REPORTING AND ANALYSIS REQUIREMENTS

ID	Requirement	Description	Priority
RA.1	Student & Course Activity Reporting	Solution shall provide reports on student registrations, course enrollments, course completion, attendance, and performance.	High
RA.2	Engagement & Content Analytics	Solution shall track student interactions with CMS content,	High

ID	Requirement	Description	Priority
		marketing campaigns, notifications, and featured courses.	
RA.3	Instructor Performance Reporting	Solution shall provide reports on materials uploaded, assignments created, grading completed, and course management activities by instructors.	Medium
RA.4	Website & Mobile Usage Analytics	Solution shall monitor web portal and mobile app usage, including page views, session duration, and device/platform metrics.	Medium
RA.5	Customizable Dashboards	System shall provide flexible dashboards allowing administrators to view KPIs, student activity, and course statistics in real-time.	High
RA.6	Export & Data Sharing	System shall allow exporting reports to Excel, Word, or PDF formats and support sharing with authorized users.	Medium
RA.7	Trend Analysis & Historical Reports	System shall allow reviewing historical trends for enrollments, course popularity, and engagement over time.	High
RA.8	Notifications & Alerts	System shall generate notifications for significant deviations, such as low enrollment, inactive students, or system performance alerts.	Medium
RA.9	Automated Reporting	System shall support scheduled automated generation and delivery of reports to designated stakeholders via email or internal messaging.	High
RA.10	Compliance & Regulatory Reporting	System shall provide reports for NAFATH verification, parental approvals, and unified student profile compliance according to regulations.	High

4.19. ALERTING AND COLLABORATION REQUIREMENTS

TABLE 21: ALERTING AND COLLABORATION REQUIREMENTS

ID	Requirement	Description	Priority
AC.1	Notifications for Course & Registration	System shall notify students and parents about course registration status, approvals, rejections, deadlines, and important updates via email, SMS, or mobile push notifications.	High
AC.2	Alerts for System Events	System shall generate alerts for system events such as failed registrations, LMS access issues, or content upload errors to administrators.	High
AC.3	Collaboration via Messaging & Forums	System shall allow students, instructors, and administrators to communicate via forums, groups, or direct messaging for academic and operational collaboration.	Medium
AC.4	Scheduled Maintenance Alerts	System shall notify users in advance about planned maintenance or downtime to avoid disruptions in registration or LMS access.	Medium
AC.5	SLA & Compliance Alerts	System shall alert administrators when KPIs, enrollment targets, or compliance metrics (e.g., parental approvals, NAFATH verification) are not met.	High
AC.6	Escalation & Follow-up Mechanism	System shall provide automatic escalation for unresolved alerts to higher authority or responsible staff members to ensure timely resolution.	Medium

4.20. USER MANAGEMENT REQUIREMENTS

TABLE 22 : SECURITY REQUIREMENTS

ID	Requirement	Description	Priority
SR.1	Data Privacy & Security	Solution shall manage user privileges and enforce industry-standard security practices to guarantee integrity and confidentiality of all student and instructor data.	High
SR.2	Multi-Customer Security	Solution shall support multiple user groups (students, parents, instructors, admins) with isolated access to their own data and profiles.	High
SR.3	External Access Control	External users (parents, partners) shall only access authorized data, ensuring no visibility outside granted permissions.	High
SR.4	Role-Based Access Control (RBAC)	Application shall allow configuration of permissions based on roles (Student, Parent, Instructor, SIS Admin, CMS Admin).	High
SR.5	Personnel Profile	Solution shall allow creation and management of individual profiles for authorized staff including login credentials, role, and permissions.	High
SR.6	Personal Information Storage	Solution shall securely store personal information (home address, phone numbers, email) and allow access only to authorized roles.	Medium
SR.7	Two-Factor Authentication (2FA)	System shall require OTP verification in addition to credentials for secure login for all users with sensitive access (admins, instructors).	High

ID	Requirement	Description	Priority
SR.8	Audit & Activity Logs	Solution shall maintain logs of all user actions (login, registration, updates) for auditing and compliance purposes.	High
SR.9	Session Management	System shall enforce secure session timeouts, automatic logout after inactivity, and prevent concurrent sessions for the same user account when needed.	Medium

<ATTACH THE ROLES-PERMISSION MATRIX>

4.21. INTEGRATION REQUIREMENTS

TABLE 23: INTEGRATION REQUIREMENTS

ID	Requirement	Description	Priority
IR.1	Web Portal ↔ LMS Integration	Solution shall integrate Web Portal and LMS via SSO to allow seamless login, profile sync, and course enrollment tracking.	High
IR.2	Web Portal ↔ SIS Integration	Solution shall integrate Web Portal with SIS to enable automated approval workflows, parental consent tracking, and unified student profiles.	High
IR.3	SIS ↔ LMS Integration	SIS shall auto-create and synchronize student/instructor	High

ID	Requirement	Description	Priority
		profiles in LMS for course access, attendance tracking, and grading.	
IR.4	CMS ↔ Web Portal Integration	CMS shall publish dynamic content (news, blogs, announcements, featured courses) to the Web Portal and push notifications to users.	Medium
IR.5	Analytics Tool Integration	Solution shall integrate with analytics tools (e.g., Google Analytics) to track engagement, course popularity, and user activity across Web Portal and Mobile App.	High
IR.6	Mobile App ↔ Web Portal & LMS	Mobile App shall synchronize user profiles, notifications, course materials, and personalized dashboard data with Web Portal and LMS in near real-time.	High
IR.7	Payment Gateway Integration	Online payment gateway shall integrate with Web Portal and SIS to manage course payments, subscriptions, and refunds for future paid courses.	Medium
IR.8	NAFATH Authentication	Web Portal and SIS shall integrate with NAFATH for ID verification during registration, ensuring compliance with national regulations.	High
IR.9	Email / Notification Service	Integration with email/SMS services to send automated alerts, enrollment confirmations, parental approvals, and system notifications.	Medium
IR.10	Third-Party Tools / Optional Services	Optional integration with external tools (e.g., video conferencing, external LMS plugins) without affecting core functionality.	Low

5 TRANSITION REQUIREMENTS

ID	Requirement	Description	Priority
TR.1	Data Migration	Migrate existing student, course, and registration data from legacy systems to the new SIS, LMS, and Web Portal, ensuring data accuracy and consistency.	High
TR.2	System Integration	Ensure proper integration with NAFATH for ID verification, existing authentication systems, and other authorized data sources during the transition phase.	High
TR.3	Staff Training	Provide training programs for administrative staff, instructors, and content managers on how to use the new system, including Web Portal, LMS, SIS, and CMS functionalities.	Medium
TR.4	User Onboarding	Guide students, parents, and instructors through the process of creating accounts, logging in, and accessing learning materials and dashboards.	High
TR.5	Parallel Run & System Validation	Operate the new system in parallel with legacy processes for a defined period to validate data integrity, registration workflows, and LMS access before full cutover.	Medium
TR.6	Communication & Change Management	Communicate the upcoming changes to all stakeholders (students, parents, instructors, and staff) and manage expectations to minimize disruption during system adoption.	Medium
TR.7	Backup & Contingency Plan	Maintain backups of legacy data and establish contingency plans to revert to previous systems in case	High

ID	Requirement	Description	Priority
		of critical failures during the transition.	

6 PRODUCT INFORMATION

6.1. BUSINESS RULES

- Students under 14 years old must obtain parental approval before completing course registration.
- All users must log in via NAFATH for identity verification.
- All courses must be available in both Arabic and English

6.2. CONSTRAINTS

- The system must be compatible with modern devices and web browsers.
- Access to sensitive data is restricted according to Role-Based Access Control (RBAC).
- Time constraints during peak registration periods.

6.3. ASSUMPTIONS

- All students have a NAFATH account.
- Infrastructure will be provided to ensure 99.9% system uptime.
- All educational content will be available digitally at launch.

6.4. ISSUES

- Manual processes cause delays in approvals and registrations.
- Lack of unified student data tracking across different systems.

- Low student engagement due to limited user experience with current content.

6.5. RISKS

- Security issues or potential data breaches.
- Delays in integration with NAFATH or LMS systems.
- Resistance to change from staff or students during transition to the new system.
uncertainty

7 DATA REQUIREMENTS

<Attach the ERD>

