**IEMConnect College Website Requirements Document**

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**1. Introduction**

**1.1 Purpose**

This document outlines the functional and non-functional requirements for the development of "IEMConnect," a new, comprehensive college website for IEM College. This website will serve as the primary digital hub for all stakeholders, including prospective students, current students, faculty, staff, and alumni.

**1.2 Background**

IEM College aims to modernize its online presence to better serve its growing community and enhance its reputation as a leading educational institution. The current digital infrastructure is fragmented and lacks the integrated features necessary for a seamless user experience and efficient administrative operations. IEMConnect will address these challenges by providing a unified, intuitive, and feature-rich platform.

**1.3 Goals**

The primary goals of the IEMConnect project are to:

* Enhance the college's digital footprint and brand image.
* Improve accessibility and usability for all users.
* Streamline key administrative processes (e.g., admissions, course registration).
* Facilitate better communication and engagement within the college community.
* Provide a secure and scalable platform for future growth.

**2. Scope**

**2.1 In Scope**

The initial phase of the IEMConnect project will include:

* A public-facing website for general information and prospective students.
* A secure student portal for enrolled students.
* A secure faculty portal for academic staff.
* A robust administrative content management system (CMS) for college staff.

**2.2 Out of Scope (for this phase, to be considered in future phases)**

* Integration with existing legacy Student Information Systems (SIS) beyond data display (e.g., direct data manipulation from IEMConnect into SIS).
* Development of native mobile applications (the website will be responsive).
* Advanced alumni networking features (beyond basic profiles and news).

**3. Stakeholders**

The primary stakeholders for the IEMConnect website include:

* **Prospective Students:** Seeking admission information, courses, and campus life details.
* **Current Students:** Accessing academic information, resources, and campus services.
* **Faculty Members:** Managing courses, communicating with students, and showcasing research.
* **Administrative Staff:** Managing content, user accounts, and college operations.
* **Alumni:** Staying connected with college news and events.
* **General Public:** Seeking general information about IEM College.
* **IT Department:** Responsible for maintenance, security, and infrastructure.

**4. Functional Requirements**

**4.1 Public-Facing Website**

The public website should provide comprehensive information about IEM College and attract prospective students.

* **FR-P1: About Us Section:** Display college mission, vision, history, accreditation, and leadership.
* **FR-P2: Admissions Section:**
  + Detailed information on undergraduate and postgraduate programs.
  + Eligibility criteria and application procedures.
  + Online application forms with submission capabilities.
  + FAQ section for admissions.
* **FR-P3: Academics Section:**
  + Information on departments, courses offered, and program structures.
  + Downloadable course syllabi and academic calendars.
* **FR-P4: News & Announcements:** A dynamic section for publishing college news, press releases, and general announcements.
  + Content should be easily manageable via the Admin Panel (FR-A2).
* **FR-P5: Events Calendar:** An interactive calendar displaying upcoming college events (academic, cultural, sports).
  + Events should be filterable by type and date.
  + Content should be easily manageable via the Admin Panel (FR-A3).
* **FR-P6: Faculty Directory:** A searchable directory of faculty members with profiles (name, department, research interests, contact info).
* **FR-P7: Contact Us:** Provide contact forms, departmental contact details, and campus location maps.
* **FR-P8: Image & Video Galleries:** Showcase campus life, events, and facilities.

**4.2 Student Portal (Authenticated Access)**

The student portal should provide personalized access to academic and administrative resources.

* **FR-S1: Secure Login:** Students must be able to log in using unique credentials.
* **FR-S2: Personal Profile:** View and update personal information (contact details, emergency contacts).
* **FR-S3: Course Registration:** Allow students to view available courses, register for classes, and manage their schedules.
* **FR-S4: Grades & Transcripts:** Access to current grades, historical academic records, and unofficial transcripts.
* **FR-S5: Attendance Tracking:** View attendance records for enrolled courses.
* **FR-S6: Announcements & Notifications:** Receive personalized announcements and notifications from faculty and administration.
* **FR-S7: Academic Calendar:** Access to a personalized academic calendar with important dates (deadlines, holidays).
* **FR-S8: Resource Library:** Access to downloadable forms, handbooks, and other academic resources.
* **FR-S9: Fee Payment Integration:** Integration with a secure payment gateway for tuition and other fees.

**4.3 Faculty Portal (Authenticated Access)**

The faculty portal should support academic management and student interaction.

* **FR-F1: Secure Login:** Faculty members must be able to log in using unique credentials.
* **FR-F2: Course Management:**
  + Upload and manage course materials (syllabi, lecture notes, readings).
  + Create and manage assignments, quizzes, and exams.
* **FR-F3: Grade Entry & Management:** Enter and update student grades for their courses.
* **FR-F4: Attendance Submission:** Submit and manage attendance records for their classes.
* **FR-F5: Student Communication:** Send announcements and messages to enrolled students.
* **FR-F6: Personal Profile Management:** Update their professional profile, including research interests and publications.

**4.4 Admin Panel (Authenticated Access)**

The admin panel should provide tools for managing website content, users, and overall system configuration.

* **FR-A1: User Management:** Create, edit, and delete user accounts for students, faculty, and staff. Assign and manage user roles and permissions.
* **FR-A2: Public Content Management:** A user-friendly CMS to create, edit, and publish content for the public-facing website (e.g., About Us, Academics pages).
* **FR-A3: News & Events Management:** Tools to add, edit, publish, and archive news articles and event details.
* **FR-A4: Admissions Application Review:** View and manage submitted online applications from prospective students.
* **FR-A5: Reporting & Analytics:** Basic dashboards for website usage statistics (e.g., page views, popular content).
* **FR-A6: System Configuration:** Manage global website settings, integrations, and security parameters.

**5. Non-Functional Requirements**

**5.1 Performance**

* **NFR-P1:** Page load times should be less than 3 seconds on a standard broadband connection.
* **NFR-P2:** The system should support at least 1,000 concurrent users without significant degradation in performance.
* **NFR-P3:** Database queries should be optimized for quick retrieval of information.

**5.2 Security**

* **NFR-S1:** All data transmission between the user and the server must be encrypted using SSL/TLS.
* **NFR-S2:** User authentication must be robust, including password hashing and salting. Multi-factor authentication (MFA) is a strong consideration.
* **NFR-S3:** Implement input validation to prevent common web vulnerabilities (e.g., SQL injection, XSS).
* **NFR-S4:** Role-based access control (RBAC) must be strictly enforced for all authenticated portals and the admin panel.
* **NFR-S5:** Sensitive data (e.g., student grades, personal information) must be encrypted at rest.

**5.3 Usability**

* **NFR-U1:** The website must have an intuitive and easy-to-navigate interface for all user types.
* **NFR-U2:** The user interface (UI) should be clean, modern, and consistent across all sections.
* **NFR-U3:** Error messages should be clear, concise, and user-friendly, guiding users on how to resolve issues.

**5.4 Scalability**

* **NFR-SC1:** The architecture should be designed to accommodate a significant increase in users and content over the next 5 years.
* **NFR-SC2:** The system should allow for easy addition of new features and modules in future phases.

**5.5 Reliability**

* **NFR-R1:** The website should aim for 99.5% uptime, excluding scheduled maintenance.
* **NFR-R2:** Robust error logging and monitoring mechanisms should be in place.
* **NFR-R3:** Regular data backups and disaster recovery procedures must be established.

**5.6 Compatibility**

* **NFR-C1:** The website must be fully responsive and optimized for viewing on various devices (desktops, laptops, tablets, smartphones).
* **NFR-C2:** The website must be compatible with the latest versions of major web browsers (Chrome, Firefox, Edge, Safari).

**5.7 Maintainability**

* **NFR-M1:** The codebase should be well-structured, modular, and extensively commented to facilitate future maintenance and development.
* **NFR-M2:** Comprehensive technical documentation should be provided.

**5.8 Accessibility**

* **NFR-A1:** The website must comply with WCAG (Web Content Accessibility Guidelines) 2.1 Level AA standards to ensure accessibility for users with disabilities.

**6. Technology Considerations (Preliminary)**

While we are open to Cognizant's recommendations, our preliminary thoughts on the technology stack include:

* **Frontend:** A modern JavaScript framework (e.g., React, Angular, or Vue.js) for a dynamic and interactive user experience.
* **Backend:** A robust and scalable framework (e.g., Node.js with Express, Python with Django/Flask, or Java with Spring Boot).
* **Database:** A reliable relational database (e.g., PostgreSQL or MySQL) capable of handling complex data structures.
* **CMS:** Consideration for a headless CMS (e.g., Strapi, Contentful) or an integrated CMS solution for content management.
* **Cloud Platform:** Deployment on a scalable cloud infrastructure (e.g., AWS, Azure, Google Cloud Platform) for high availability and performance.

**7. Proposed Timeline & Budget (High-Level)**

We envision this project to be executed in phases, starting with a detailed discovery and planning phase. A more precise timeline and budget will be determined after a thorough understanding of the detailed scope and technical approach. We are keen to discuss these aspects in our upcoming meeting.

**8. Conclusion**

IEM College is committed to the success of the IEMConnect project and believes that a partnership with Cognizant will be instrumental in achieving our digital transformation goals. We are confident that IEMConnect will significantly enhance our operational efficiency and provide an unparalleled digital experience for our entire college community.

We look forward to your review of this document and the opportunity to discuss how we can move forward together.