Technical Proposal

For the Development, Deployment, and Maintenance of the College Website,
the Office Management System, and UG/PG Admission Portal
Submitted by: Studio 1947, 24th August 2025

Module 01: Dynamic College Website

+ Design & Interface

1. A modern, visually appealing homepage with dynamic sliders, galleries, and interactive sections.
2. Fully responsive design for desktop, tablet, and mobile screens using React.js/Vue.js + Tailwind CSS.
3. Intuitive navigation structure with quick access to courses, admissions, faculty, and notices.

+ CMS & Real-time Updates

1. Content Management System (CMS) enabling authorised staff to update content without coding.
2. Role-based access for department heads, faculty, and administrators to publish notices, circulars, events, and results.

+ Dynamic Modules

1. **News & Events**
   Admin dashboard to publish news, seminars, conferences, and achievements.

2. **Notices & Circulars**
   Categorised, searchable notice board with real-time updates.

3. **Tender Documents**
   Secure upload and archive of tender notifications.

4. **Digital Prospectus**
   Downloadable prospectus and academic brochures in PDF.

Rooted in Local Wisdom,
Designed for Global Impact.

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5. **Photo/Video Gallery**
   Year-wise and department-wise media archives with embedded YouTube support.

6. **Faculty/Staff Profiles**
   Searchable directory with photos, designations, qualifications, and contact details.

7. **Download Centre**
   Academic forms, syllabi, and exam-related documents.

8. **Feedback & Grievance Redressal**
   Secure form submissions with admin tracking.

+ Accessibility & Compliance

- Adherence to Indian government WCAG 2.1 guidelines with features like screen-reader support, keyboard navigation, and adjustable text size.

+ Hosting & Security

> VPS/dedicated server hosting with SSL, firewall, malware protection, and DDoS safeguards.
> Automated weekly backups with disaster recovery.
> Annual Maintenance Contract (AMC) to ensure continuous uptime and technical support.

Module 02: Integrated Office Management System

A browser-based ERP covering all major functions of the college:

1. **Front Office Management**
   Visitor log, enquiry handling, complaint ticketing, call logs, postal/courier records.

2. **Student Information Management**
   Centralised database with personal, academic, and document history.

3. **Admission Management**
   Online application processing, merit list generation, verification workflow, and counselling schedule.

4. **Fees & Accounting**
   Payment gateway integration, receipts, concession tracking, and financial reports.

5. **Attendance Management**
   Biometric/RFID-enabled real-time attendance with SMS/email alerts to parents.

6. **HR & Payroll**
   Staff database, leave management, payroll slips, PF/ESI/TDS compliance.

7. **Examination Management**
   Exam scheduling, hall ticket generation, marks entry, GPA/CGPA calculation, and result publication.

8. **Library Management**
   Book cataloguing, issue/return with barcode/RFID, fine calculation, and reservation system.

9. **Asset & Inventory**
   Procurement, tagging, stock management, depreciation, and disposal records.

10. **Document Management**
    Role-based upload/retrieval with audit logs and version control.

11. **Calendar & Event Management**
    Academic calendar builder, event scheduling with room/hall booking.

12. **Reporting & Analytics**
    Custom dashboards, role-specific KPIs, exportable reports (Excel/PDF).

Module 03: UG & PG Online Admission Portal

+ Application Management

- Dynamic, course-wise online application forms with real-time validation.
- Auto eligibility checks to block ineligible applicants.
- Document upload (PDF/JPG/PNG) with OCR/manual verification and admin approval.

+ Fee Collection

- Secure payment gateway integration (UPI, Netbanking, Cards).
  Automated receipts with GST breakup, QR code, and instant student notifications.

+ Merit List & Seat Allotment

- Auto-generated merit lists based on criteria and reservation rules.
- Transparent seat allotment with student accept/reject/upgrade options.
- Multiple counselling and mop-up rounds supported.

+ Communication & Tracking

- Automated SMS/email notifications at each stage: application, document verification, shortlisting, selection, and seat allotment.
- Applicant dashboard for status tracking, grievance redressal, and final admission confirmation.

+ Admin Dashboard

- Real-time monitoring of applications, merit lists, payments, and seat matrix.
  Role-based access for central administration, departments, and colleges.

+ Additional Features

- Multi-language support for English, Hindi, and Bengali.
- Mobile-first responsive design with an optional app version.
- Data export in Excel/PDF formats.
- Compliance with the Indian IT Act and data privacy norms.

Performance & General Requirements

1. All systems are fully compliant with the Indian government data privacy and accessibility standards.
2. Modular and scalable architecture ensuring future upgrades.
3. Payment gateway transaction charges are billed separately.
4. Dedicated helpdesk and technical support team ensuring **minimal downtime**.

Submission Approach

Our technical proposal covers:

> **Tech Stack:** React.js/Vue.js, Node.js, PostgreSQL/MySQL, AWS/DigitalOcean hosting.
> **Security:** HTTPS/SSL, AES/RSA encryption, CSRF/XSS protection, secure coding practices.
> **Compliance:** Adherence to IT Act, NAAC/NIRF documentation, and accessibility standards.

Evaluation Alignment

1. **Technical Competence:** Detailed modular architecture matching tender requirements. **Compliance:** All modules are designed as per accessibility and government privacy rules.

2. **Support & Maintenance:** One year of free maintenance, followed by AMC options.

3. **Scalability:** Modular, cloud-ready system with scope for future integration (LMS, alumni portals, etc.).

Timeline

The project is expected to take approximately **180 working days**. The exact schedule can be finalised at the time of agreement.