



Enterprise/Security Focused
"Cloud Confidence, Every Time."

Unlocking Limitless Potential through AI

SHIVAKARMA INFOTECH SOLUTIONS PVT. LTD.

+91 9919955501

Rajajipuram Lucknow, Uttar Pradesh - 226017

contact@shivakarma.in



SHIVAKARMA INFOTECH SOLUTIONS PVT. LTD.
INNOVATION MEETS EXECUTION

ID CIN - U62099UP2025PTC223343

www.shivakarma.in

PROPOSAL

Learning Management System (LMS)

With AI-Powered Content Generation

For Indian Medical Education



Submitted by: Shivakarma Infotech Solutions Private Limited

Lucknow, Uttar Pradesh

Date: August 2025

+91 7376491929
+91 9919955501

sschauhan@shivakarma.in,
contact@shivakarma.in

F-1015, RAJAJIPURAM,
LUCKNOW - 226017,
Uttar Pradesh



Table of Contents

- ▶ 1. Executive Summary
- ▶ 2. Company Profile
- ▶ 3. Understanding Your Requirements
- ▶ 4. Proposed Solution
- ▶ 5. Detailed Feature Specifications
- ▶ 6. AI-Powered Innovations
- ▶ 7. Compliance with Indian Medical Education Standards
- ▶ 8. System Administration & Security
- ▶ 9. Implementation Methodology
- ▶ 10. Investment Details
- ▶ 11. Return on Investment Analysis
- ▶ 12. Support & Maintenance
- ▶ 13. Terms & Conditions
- ▶ 14. Why Choose Us
- ▶ 15. Next Steps



TECHNICAL & COMMERCIAL PROPOSAL

RFP Reference: Medical College LMS Implementation

1. Executive Summary

Shivakarma Infotech Solutions Private Limited is pleased to submit this comprehensive proposal for implementing an advanced Learning Management System (LMS) with AI-powered capabilities at your esteemed medical institution. Our solution is specifically designed to meet the unique requirements of Indian medical education while adhering to National Medical Commission (NMC) guidelines and standards.

With over 6+ years of experience in developing educational technology solutions, including our flagship product HMSTech, we understand the complexities of medical education in India. Our proposed LMS will revolutionize how medical knowledge is delivered, assessed, and tracked, while significantly reducing the administrative burden on faculty and staff.

Key Highlights of Our Proposal:

- Complete LMS solution tailored for Indian medical colleges
- AI-powered content generation in multiple Indian languages
- Full compliance with NMC, MCI, and AICTE guidelines
- Integration with existing IHMS infrastructure
- Competitive pricing with flexible payment options
- Local support team based in Lucknow, UP



2. Company Profile

Shivakarma Infotech Solutions Private Limited

Established: 2019

Incorporated In: May 2025

Headquarters: Lucknow, Uttar Pradesh, India

Core Expertise: Educational Technology, Healthcare IT, Enterprise Solutions

Team Strength: 5+ IT Professionals

Key Products: HMSTech-AI (Hospital ERP), edu-AI(Education ERP), E-commerce

2.1 Our Credentials

- ISO 9001:2015 Certified for Quality Management
- ISO 27001:2013 Certified for Information Security
- ISO 20000-1:2018 Certified for IT Service Management System



3. Understanding Your Requirements

Based on our analysis and the RFP requirements, we understand that your institution needs a comprehensive LMS that addresses the following key challenges:

- Managing complex medical curriculum as per NMC guidelines
- Reducing faculty workload in content creation and assessment
- Tracking competency-based medical education (CBME) outcomes
- Ensuring seamless integration with hospital systems for clinical training
- Providing multilingual support for diverse student populations
- Maintaining compliance with Indian medical education regulations

4. Proposed Solution

Our proposed LMS solution, powered by HMSTech-AI technology and enhanced with AI capabilities, offers a comprehensive platform designed specifically for Indian medical colleges. The system will serve as an integral component of your IHMS implementation.

Solution Architecture

Our multi-tier architecture ensures scalability, security, and performance:

- **Presentation Layer:** Responsive web interface and mobile apps
- **Application Layer:** Microservices-based business logic
- **AI Engine:** Custom-trained models for medical content
- **Data Layer:** Distributed database with real-time synchronization
- **Integration Layer:** APIs for IHMS and third-party systems



5. Detailed Feature Specifications

Based on the latest technology platform architecture, our LMS includes the following comprehensive modules:

5.1 Dashboard & Home Module

Personal Dashboard

Core Functions:

- **Personalized Welcome Screen:** Role-based greeting with user-specific information
- **Quick Statistics Overview:** At-a-glance metrics for courses, assignments, and progress
- **Custom Widget Configuration:** Drag-and-drop dashboard customization
- **Recent Activity Feed:** Timeline of latest actions and updates
- **Performance Indicators:** Visual charts showing academic progress
- **Goal Tracking:** Personal academic goals and achievement progress

Business Value: Increases user engagement by 40% through personalized experience and quick access to relevant information.

Academic Overview

Core Functions:

- **Semester/Year Summary:** Comprehensive academic performance overview
- **Course Enrollment Status:** Current and pending course registrations
- **Credit Hours Tracking:** Completed vs. required credits visualization
- **GPA/CGPA Calculator:** Real-time grade point average computation





- **Academic Calendar Integration:** Important dates and deadlines
- **Prerequisite Checker:** Course eligibility verification

Quick Links

Core Functions:

- **Customizable Shortcuts:** User-defined quick access buttons
- **Frequently Used Features:** Auto-generated shortcuts based on usage patterns
- **Emergency Links:** Quick access to support, helpdesk, and critical resources
- **External System Integration:** Single sign-on links to library, email, and other platforms
- **Mobile App Download:** Direct links to iOS and Android applications

Recent Activities

Core Functions:

- **Activity Timeline:** Chronological list of user actions and system updates
- **Notification History:** Archive of all received notifications
- **Assignment Submissions:** Recent submission history with status tracking
- **Forum Participations:** Discussion forum activities and contributions
- **Login History:** Security tracking of account access

Upcoming Events

Core Functions:





- **Calendar Integration:** Synchronized events from academic calendar
- **Assignment Deadlines:** Upcoming submission dates with countdown timers
- **Examination Schedule:** Test and exam dates with location information
- **Class Timetable:** Next scheduled classes and lectures
- **Personal Reminders:** User-created custom reminders and alerts
- **Event Categories:** Color-coded categorization of different event types

5.2 🎓 Academic Management Module

Course Management

Course Creation & Structure:

- **Course Builder Tool:** Drag-and-drop interface for course design
- **Curriculum Mapping:** Alignment with institutional learning outcomes
- **Module Organization:** Hierarchical content structure with chapters and topics
- **Prerequisites Management:** Define and enforce course prerequisites
- **Co-requisites Setup:** Manage simultaneous course requirements
- **Credit Hour Assignment:** Define theoretical and practical credit hours

Enrollment & Registration:

- **Self-Enrollment Options:** Student-initiated course registration
- **Approval Workflows:** Multi-level approval for course enrollment
- **Waitlist Management:** Queue management for oversubscribed courses
- **Batch Management:** Group students into manageable batches
- **Capacity Control:** Maximum enrollment limits per course

Faculty Assignment:





- **Instructor Allocation:** Assign primary and secondary instructors
- **Teaching Assistant Management:** TA assignment and role definition
- **Workload Distribution:** Fair distribution of teaching responsibilities
- **Subject Matter Expert Pool:** Expert instructor database

Content Delivery

Content Management:

- **Multi-format Support:** Text, video, audio, images, 3D models, simulations
- **Version Control:** Track content changes and maintain revision history
- **Content Templates:** Pre-designed templates for different content types
- **Multimedia Library:** Centralized repository for all media files
- **Content Scheduling:** Timed release of course materials
- **Adaptive Content:** Personalized content based on learning patterns

Delivery Mechanisms:

- **Sequential Learning Paths:** Structured progression through course content
- **Self-Paced Learning:** Flexible timing for content consumption
- **Blended Learning Support:** Integration of online and offline activities
- **Mobile-Optimized Delivery:** Responsive content for all devices
- **Offline Access:** Downloadable content for offline studying

Interactive Elements:

- **Interactive Videos:** Clickable hotspots and embedded quizzes
- **Virtual Labs:** Simulated laboratory experiments
- **Case Study Modules:** Interactive case-based learning scenarios



- **Gamification Elements:** Badges, points, and achievement systems

Study Materials

Resource Management:

- **Digital Textbooks:** Interactive e-books with search and annotation
- **Reference Materials:** Curated collection of additional reading resources
- **Lecture Notes:** Faculty-created and AI-generated notes
- **Practice Questions:** Topic-wise question banks with explanations
- **Video Lectures:** Recorded and live streaming capabilities
- **Audio Resources:** Podcasts and audio lectures for mobile learning

Organization & Access:

- **Categorized Libraries:** Subject and topic-wise organization
- **Search & Filter:** Advanced search with multiple filter options
- **Bookmark System:** Save and organize favorite resources
- **Recent Access History:** Quick access to recently viewed materials
- **Sharing Capabilities:** Share resources with classmates and study groups

Collaborative Features:

- **Annotation Tools:** Highlight and comment on digital materials
- **Study Groups:** Collaborative spaces for group study
- **Peer Reviews:** Student-generated content review system
- **Discussion Threads:** Topic-specific discussion forums





5.3 Assessment & Evaluation Module

Assignments

Assignment Creation:

- **Multiple Assignment Types:** Essays, reports, projects, presentations, coding assignments
- **Template Library:** Pre-built assignment templates for different subjects
- **Instruction Builder:** Rich text editor with multimedia support
- **Rubric Creation:** Detailed grading criteria and weightage definition
- **Deadline Management:** Multiple deadlines with grace period settings
- **Group Assignment Tools:** Collaborative assignment creation and management

Submission Management:

- **File Upload System:** Support for multiple file formats and sizes
- **Version Control:** Track multiple submission attempts
- **Plagiarism Detection:** Integrated anti-plagiarism tools
- **Late Submission Handling:** Automatic penalty calculation
- **Submission Confirmation:** Email and system notifications
- **Bulk Download:** Faculty can download all submissions at once

Grading & Feedback:

- **Online Grading Interface:** Side-by-side viewing and grading
- **Audio/Video Feedback:** Rich feedback options beyond text
- **Rubric-based Grading:** Structured evaluation using predefined criteria
- **Peer Review System:** Student-to-student evaluation workflows
- **Grade Analytics:** Statistical analysis of assignment performance





Examinations

Exam Creation & Management:

- **Question Bank Management:** Categorized repository with difficulty levels
- **Question Types:** MCQ, Multiple Select, Fill-in-blanks, Descriptive, Image-based
- **Random Question Selection:** Algorithm-based question distribution
- **Exam Blueprinting:** Topic-wise question distribution planning
- **Time Management:** Individual question timing and overall exam duration
- **Negative Marking:** Configurable penalty system

Online Proctoring:

- **AI-Based Monitoring:** Automated suspicious activity detection
- **Webcam Proctoring:** Real-time video monitoring during exams
- **Screen Recording:** Complete session recording for review
- **Browser Lockdown:** Restrict access to other applications
- **Identity Verification:** Photo ID verification before exam start
- **Incident Reporting:** Automated flagging of potential violations

Assessment Analytics:

- **Item Analysis:** Question difficulty and discrimination analysis
- **Performance Distribution:** Statistical analysis of exam results
- **Comparative Analytics:** Batch and individual performance comparison
- **Learning Outcome Assessment:** Mapping performance to learning objectives
- **Improvement Recommendations:** AI-driven suggestions for weak areas

Quizzes & Tests





Quiz Management:

- **Quick Quiz Builder:** Rapid quiz creation with templates
- **Auto-Graded Quizzes:** Instant feedback and scoring
- **Practice Tests:** Unlimited attempts for skill building
- **Adaptive Testing:** Difficulty adjustment based on performance
- **Timed Assessments:** Various timing options and constraints
- **Question Pools:** Random selection from categorized question sets

Interactive Assessment Types:

- **Drag-and-Drop Questions:** Interactive question formats
- **Hotspot Questions:** Click-on-image type assessments
- **Matching Exercises:** Connect related items or concepts
- **Ordering Questions:** Sequence-based assessments
- **Simulation-Based Tests:** Virtual environment assessments

Feedback & Analytics:

- **Instant Results:** Immediate score and feedback delivery
- **Detailed Explanations:** Answer explanations and learning resources
- **Progress Tracking:** Performance improvement over time
- **Remedial Suggestions:** Personalized study recommendations
- **Peer Comparison:** Anonymous performance benchmarking





5.4 Performance & Analytics Module

Gradebook

Grade Management:

- **Comprehensive Grade Recording:** All assessment types in one interface
- **Weighted Grade Calculation:** Configurable weightage for different assessments
- **Grade Categories:** Assignments, quizzes, exams, participation, projects
- **Letter Grade Conversion:** Automatic conversion between percentage and letter grades
- **GPA/CGPA Calculation:** Real-time academic average computation
- **Grade History:** Complete academic record maintenance

Grade Book Features:

- **Multi-View Options:** Student, instructor, and administrative views
- **Export Capabilities:** Excel, PDF, and CSV export options
- **Grade Posting Options:** Selective or batch grade publication
- **Late Penalty Automation:** Automatic penalty application
- **Extra Credit Management:** Bonus points and extra credit tracking
- **Grade Change Audit:** Complete trail of grade modifications

Communication Features:

- **Grade Notifications:** Automated alerts for new grades
- **Parent/Guardian Access:** Controlled access for guardians
- **Grade Inquiry System:** Student requests for grade clarification
- **Comments & Feedback:** Detailed feedback attached to grades





Progress Tracking

Individual Progress Monitoring:

- **Learning Path Visualization:** Visual representation of course progression
- **Completion Tracking:** Module and course completion percentages
- **Time-on-Task Analytics:** Study time analysis and recommendations
- **Skill Development Tracking:** Competency-based progress measurement
- **Goal Setting & Tracking:** Personal academic goal management
- **Milestone Achievements:** Recognition of academic milestones

Comparative Analytics:

- **Peer Comparison:** Anonymous benchmarking against classmates
- **Historical Performance:** Comparison with previous semesters/years
- **Cohort Analysis:** Performance comparison across different groups
- **Subject-wise Analysis:** Strengths and weaknesses identification
- **Improvement Trends:** Performance trajectory analysis

Predictive Analytics:

- **Performance Prediction:** AI-based academic outcome forecasting
- **Risk Identification:** Early warning system for at-risk students
- **Success Probability:** Course completion likelihood analysis
- **Intervention Recommendations:** Personalized support suggestions

Reports & Analytics

Academic Reports:





- **Transcript Generation:** Official academic transcripts with seal
- **Progress Reports:** Periodic performance summaries
- **Attendance Reports:** Detailed attendance analysis
- **Grade Distribution Reports:** Statistical analysis of grades
- **Course Completion Reports:** Module and course completion tracking

Analytical Dashboards:

- **Executive Dashboards:** High-level institutional performance metrics
- **Faculty Dashboards:** Class and individual student performance
- **Student Dashboards:** Personal academic performance visualization
- **Parent Dashboards:** Student progress for guardian access
- **Custom Dashboard Builder:** Role-based dashboard customization

Advanced Analytics:

- **Learning Analytics:** Detailed learning behavior analysis
- **Engagement Metrics:** Student engagement measurement
- **Resource Usage Analytics:** Content consumption patterns
- **Assessment Analytics:** Question and test performance analysis
- **Predictive Modeling:** Future performance prediction models

Compliance Reporting:

- **Regulatory Reports:** Government and accreditation body reports
- **Audit Trail Reports:** Complete system activity logs
- **Data Privacy Reports:** GDPR and data protection compliance
- **Quality Assurance Reports:** Academic quality metrics



5.5 Communication Hub Module

Messaging System

Internal Messaging:

- **Real-time Messaging:** Instant message delivery with read receipts
- **Group Messaging:** Class, department, and custom group communications
- **File Sharing:** Document, image, and multimedia file sharing
- **Message Threading:** Organized conversation threads
- **Priority Messaging:** Urgent message classification and alerts
- **Message Search:** Advanced search across all conversations

Communication Features:

- **Voice Messages:** Audio message recording and playback
- **Video Calls:** Integrated video calling functionality
- **Screen Sharing:** Desktop sharing for tutoring sessions
- **Message Translation:** Multi-language message translation
- **Offline Messaging:** Message delivery when users come online
- **Message Encryption:** End-to-end encryption for sensitive communications

Notification Management:

- **Push Notifications:** Mobile and desktop notification delivery
- **Email Integration:** Email notifications for important messages
- **SMS Integration:** Critical alerts via SMS
- **Notification Preferences:** User-customizable notification settings
- **Do Not Disturb:** Quiet hours and focus mode settings





Discussion Forums

Forum Structure:

- **Hierarchical Forums:** Course, subject, and topic-based organization
- **Thread Management:** Organized discussion threads with categories
- **Moderation Tools:** Post approval and content moderation
- **Pinned Posts:** Important announcements and sticky posts
- **Forum Analytics:** Participation and engagement metrics
- **Archive System:** Historical forum content preservation

Interactive Features:

- **Rich Text Editor:** Formatting options with multimedia support
- **Voting System:** Upvote/downvote for helpful responses
- **Best Answer Selection:** Mark solutions and helpful responses
- **User Reputation:** Karma system for active contributors
- **Expert Badges:** Recognition for subject matter experts
- **Follow Discussions:** Subscribe to thread updates

Content Management:

- **Search Functionality:** Full-text search across all forums
- **Tag System:** Categorize and filter discussions
- **Content Curation:** Faculty curation of valuable discussions
- **FAQ Generation:** Auto-generate FAQs from popular discussions
- **Export Options:** Export discussions for offline reading

Collaboration Tools:

- **Study Groups:** Private discussion spaces for collaborative learning





- **Project Forums:** Dedicated spaces for group project discussions
- **Peer Tutoring:** Student-to-student help and mentoring forums
- **Q&A Sessions:** Structured question-answer sessions with faculty
- **Live Discussions:** Real-time chat during lectures or events
- **Anonymous Posting:** Option for anonymous questions and discussions



5.6 Scheduling & Calendar Module

Timetable Management

Automated Scheduling:

- **Smart Timetable Generator:** AI-powered automatic schedule creation
- **Conflict Detection:** Automatic identification of scheduling conflicts
- **Resource Optimization:** Efficient classroom and faculty allocation
- **Constraint Management:** Handle faculty preferences and availability
- **Multi-Campus Support:** Scheduling across multiple locations
- **Semester Planning:** Long-term academic calendar management

Manual Scheduling Tools:

- **Drag-and-Drop Interface:** Visual schedule manipulation
- **Template Library:** Pre-built schedule templates
- **Bulk Operations:** Mass changes to multiple schedule items
- **Schedule Versioning:** Multiple schedule versions and comparisons
- **Emergency Rescheduling:** Quick schedule changes for emergencies
- **Schedule Publishing:** Controlled release of finalized schedules

Integration Features:

- **Room Management:** Integration with facility booking systems
- **Equipment Scheduling:** AV equipment and lab resource allocation
- **External Calendar Sync:** Google Calendar, Outlook integration
- **Mobile Sync:** Automatic sync with mobile calendar apps
- **Notification System:** Automated alerts for schedule changes





Appointment System

Faculty Office Hours:

- **Available Time Slots:** Faculty-defined availability windows
- **Booking Interface:** Student self-service appointment booking
- **Buffer Time Management:** Automatic spacing between appointments
- **Recurring Availability:** Weekly/monthly recurring time slots
- **Last-Minute Changes:** Easy rescheduling and cancellation
- **Virtual Meeting Options:** Online and in-person appointment types

Academic Counseling:

- **Counselor Assignment:** Student-counselor matching system
- **Priority Booking:** Emergency and urgent appointment handling
- **Session Notes:** Confidential appointment record keeping
- **Follow-up Scheduling:** Automatic follow-up appointment suggestions
- **Group Sessions:** Multi-student counseling session management

Administrative Appointments:

- **Department Meetings:** Administrative appointment scheduling
- **Examination Appointments:** Oral exam and viva scheduling
- **Project Presentations:** Student presentation slot management
- **Interview Scheduling:** Admission and placement interview management
- **Resource Booking:** Equipment and facility reservation system

Communication & Reminders:

- **Automated Reminders:** Email and SMS appointment reminders
- **Confirmation System:** Appointment confirmation requirements





SHIVAKARMA INFOTECH SOLUTIONS PVT. LTD.
INNOVATION MEETS EXECUTION

ID CIN - U62099UP2025PTC223343

www.shivakarma.in

- **Waitlist Management:** Queue for overbooked time slots
- **No-Show Tracking:** Attendance tracking for appointments
- **Feedback Collection:** Post-appointment satisfaction surveys

+91 7376491929
+91 9919955501

sschauhan@shivakarma.in,
contact@shivakarma.in

F-1015, RAJAJIPURAM,
LUCKNOW - 226017,
Uttar Pradesh



5.7 Attendance & Participation Module

Daily Attendance

Attendance Capture Methods:

- **Biometric Integration:** Fingerprint and face recognition systems
- **RFID/NFC Cards:** Student ID card-based attendance
- **Mobile App Check-in:** Geolocation-based mobile attendance
- **QR Code Scanning:** Quick check-in via QR codes
- **Manual Entry:** Faculty manual attendance marking
- **Bulk Operations:** Mass attendance marking tools

Real-time Processing:

- **Instant Updates:** Real-time attendance data synchronization
- **Duplicate Detection:** Prevent multiple check-ins
- **Late Arrival Tracking:** Time-stamped late entry recording
- **Early Departure:** Partial attendance calculation
- **Proxy Detection:** Advanced algorithms to prevent proxy attendance
- **Exception Handling:** Special case attendance management

Attendance Rules Engine:

- **Configurable Rules:** Institution-specific attendance policies
- **Minimum Percentage:** Automatic tracking of required attendance
- **Grace Period Settings:** Late arrival tolerance configuration
- **Medical Leave Integration:** Automatic adjustment for approved leaves
- **Makeup Class Tracking:** Compensatory class attendance management





Attendance History

Historical Data Management:

- **Complete Attendance Records:** Full academic year attendance history
- **Subject-wise Tracking:** Individual course attendance monitoring
- **Monthly Summaries:** Periodic attendance performance reports
- **Trend Analysis:** Attendance pattern identification
- **Comparative Reports:** Peer and batch comparison analytics
- **Export Capabilities:** Data export for external reporting

Visualization & Analytics:

- **Attendance Charts:** Visual representation of attendance patterns
- **Heat Maps:** Color-coded attendance visualization
- **Statistical Analysis:** Mean, median, and mode calculations
- **Prediction Models:** Future attendance behavior prediction
- **Risk Assessment:** Early warning for poor attendance

Compliance Tracking:

- **Regulatory Compliance:** Government-mandated attendance requirements
- **Exam Eligibility:** Automatic eligibility calculation
- **Scholarship Impact:** Attendance impact on financial aid
- **Intervention Triggers:** Automated alerts for counseling needs





Leave Management

Leave Application System:

- **Online Leave Requests:** Digital leave application submission
- **Leave Types:** Medical, personal, emergency, and academic leaves
- **Supporting Documents:** Medical certificates and documentation upload
- **Approval Workflow:** Multi-level approval process
- **Retroactive Applications:** Past date leave request handling
- **Bulk Leave Processing:** Mass leave applications for events

Approval & Tracking:

- **Automated Routing:** Smart routing to appropriate approvers
- **Approval Hierarchy:** Department and institutional approval levels
- **Status Tracking:** Real-time application status updates
- **Notification System:** Automated status change notifications
- **Deadline Management:** Application submission deadlines





Leave Analytics:

- **Leave Balance Tracking:** Available vs. utilized leave calculation
- **Abuse Detection:** Pattern analysis for leave misuse
- **Medical Leave Trends:** Health pattern analysis
- **Department Analytics:** Leave patterns across departments
- **Impact Assessment:** Leave impact on academic performance

Integration Features:

- **Attendance Adjustment:** Automatic attendance correction
- **Academic Impact:** Course progress impact calculation
- **Make-up Requirements:** Compensatory work assignment
- **Parent Notifications:** Guardian alerts for extended leaves



5.8 Library & Resources Module

Digital Library

Digital Collection Management:

- **E-Book Repository:** Comprehensive digital book collection
- **Journal Database:** Academic and research journal access
- **Multimedia Resources:** Videos, podcasts, and interactive media
- **Thesis & Dissertations:** Student research work repository
- **Course Materials:** Lecture notes and supplementary materials
- **Reference Collections:** Dictionaries, encyclopedias, and handbooks

Search & Discovery:

- **Advanced Search Engine:** Multi-criteria search capabilities
- **Federated Search:** Search across multiple databases
- **AI-Powered Recommendations:** Personalized content suggestions
- **Subject Browse:** Hierarchical subject classification
- **Author & Title Search:** Comprehensive bibliographic search
- **Full-Text Search:** Content-based search within documents

Access & Usage:

- **Online Reading Platform:** In-browser document viewer
- **Download Options:** Offline reading capabilities
- **Mobile Access:** Responsive design for all devices
- **Citation Tools:** Automatic citation generation
- **Bookmark System:** Personal library organization





- **Reading History:** Track accessed materials

Collaborative Features:

- **Annotation Tools:** Highlight and note-taking capabilities
- **Social Reading:** Share annotations and insights
- **Reading Groups:** Collaborative reading sessions
- **Review System:** User ratings and reviews
- **Discussion Forums:** Resource-specific discussions

Resource Management

Physical Library Integration:

- **Catalog Management:** Unified physical and digital catalog
- **Circulation System:** Book borrowing and return management
- **Reservation System:** Hold requests for popular items
- **Fine Management:** Overdue penalty calculation and collection
- **Inventory Tracking:** Real-time stock level monitoring
- **RFID Integration:** Automated check-in/check-out systems

Acquisition & Collection Development:

- **Purchase Recommendations:** Faculty and student suggestions
- **Budget Management:** Acquisition budget tracking
- **Vendor Management:** Publisher and supplier relationship management
- **License Management:** Digital resource licensing and renewal
- **Usage Analytics:** Resource utilization analysis
- **Gap Analysis:** Collection strength assessment





Inter-Library Services:

- **Resource Sharing:** Inter-institutional resource sharing
- **Document Delivery:** Article and chapter request system
- **Consortium Access:** Shared database and journal access
- **Reciprocal Borrowing:** Cross-institutional borrowing privileges

Digital Rights Management:

- **Access Control:** User permission and authentication
- **Usage Monitoring:** Compliance with licensing agreements
- **Copyright Management:** Fair use and copyright compliance
- **DRM Integration:** Digital rights protection systems

Analytics & Reporting:

- **Usage Statistics:** Resource access and download metrics
- **Popular Content:** Most accessed materials identification
- **User Behavior:** Reading patterns and preferences
- **ROI Analysis:** Cost per use calculations
- **Collection Assessment:** Collection strength and gap analysis



5.9 🏆 Certification Module

Certificates

Certificate Creation & Design:

- **Template Library:** Professional certificate templates
- **Custom Design Tools:** Drag-and-drop certificate designer
- **Institution Branding:** Logo, seal, and brand integration
- **Multi-Language Support:** Certificates in multiple languages
- **Digital Signatures:** Electronic signature integration
- **Security Features:** Watermarks and anti-forgery measures

Certificate Types:

- **Course Completion:** Individual course completion certificates
- **Program Certificates:** Full program completion recognition
- **Skill Certificates:** Competency-based skill recognition
- **Participation Certificates:** Event and workshop participation
- **Achievement Certificates:** Excellence and honor recognition
- **Professional Certificates:** Industry-aligned certifications

Automated Generation:

- **Trigger-Based Generation:** Automatic creation upon completion
- **Bulk Generation:** Mass certificate creation for batches
- **Conditional Logic:** Criteria-based certificate eligibility
- **Grade-Based Variants:** Different certificates based on performance
- **Date Automation:** Automatic date and timing inclusion





Distribution & Delivery:

- **Digital Delivery:** Email-based certificate delivery
- **Download Portal:** Student self-service certificate download
- **Print-Ready Format:** High-quality PDF generation
- **Social Sharing:** Direct sharing to social media platforms
- **Employer Verification:** Direct verification links for employers

Verification & Security:

- **Blockchain Integration:** Immutable certificate verification
- **QR Code Verification:** Quick verification via QR codes
- **Online Verification Portal:** Public certificate verification
- **Certificate Registry:** Centralized certificate database
- **Anti-Fraud Measures:** Advanced security and authentication

Achievements

Achievement Framework:

- **Digital Badges:** Micro-credential and skill badge system
- **Achievement Levels:** Bronze, silver, gold tier recognition
- **Progress Badges:** Milestone and progress recognition
- **Skill Endorsements:** Peer and faculty skill endorsements
- **Portfolio Integration:** Achievement portfolio development
- **Open Badge Standard:** Industry-standard badge format

Achievement Categories:

- **Academic Excellence:** Grade and performance-based achievements





- **Participation Awards:** Engagement and activity recognition
- **Leadership Recognition:** Leadership role and responsibility badges
- **Innovation Awards:** Creative and innovative project recognition
- **Community Service:** Social service and volunteer work badges
- **Special Recognition:** Custom institutional awards

Gamification Elements:

- **Point System:** Comprehensive point accumulation system
- **Leaderboards:** Competitive ranking and recognition
- **Streaks & Challenges:** Engagement-building challenges
- **Level Progression:** Student level advancement system
- **Reward Mechanisms:** Tangible and intangible rewards

Portfolio & Showcase:

- **Digital Portfolio:** Comprehensive achievement portfolio
- **Achievement Gallery:** Visual display of accomplishments
- **Career Integration:** LinkedIn and resume integration
- **Employer Showcase:** Professional achievement presentation
- **Peer Recognition:** Student-to-student endorsement system

Analytics & Insights:

- **Achievement Analytics:** Performance and engagement correlation
- **Motivation Tracking:** Impact of achievements on student behavior
- **Completion Rates:** Achievement completion and dropout analysis
- **Effectiveness Measurement:** ROI of gamification elements
- **Predictive Modeling:** Achievement-based success prediction





6. AI-Powered Innovations

6.1 AI Content Generation Engine

Lecture Note Generation:

- **Multi-lingual Support:** Generate content in Hindi, English, and regional languages
- **Curriculum Alignment:** Auto-align with NMC competency framework
- **Reference Integration:** Automatically cite Indian medical textbooks and journals
- **Difficulty Levels:** Generate content for MBBS, MD/MS, and Super-specialty levels
- **Visual Learning:** Auto-generate diagrams and flowcharts

Smart Question Generation:

- **NEET-PG Pattern:** Generate questions matching competitive exam patterns
- **Clinical Vignettes:** Create case-based questions from patient data
- **Image-Based Questions:** Generate questions from medical images
- **Explanation Generation:** Detailed explanations for each answer option



6.2 AI Teaching Assistant

- **24/7 Query Resolution:** Answer student doubts in real-time
- **Concept Clarification:** Break down complex medical concepts
- **Study Plan Generation:** Personalized study schedules based on performance
- **Weak Area Identification:** Analyze and suggest improvement areas
- **Revision Reminders:** Spaced repetition for better retention



7. Compliance with Indian Medical Education Standards

7.1 NMC (National Medical Commission) Compliance

- Competency-Based Medical Education (CBME) framework implementation
- AETCOM (Attitude, Ethics, and Communication) module integration
- Foundation Course management for first-year MBBS
- Electives management as per new curriculum
- Logbook maintenance as per NMC guidelines
- Assessment blueprinting and mapping to competencies

7.2 Other Regulatory Compliance

- **NAAC Accreditation:** Ready reports and documentation
- **NIRF Ranking:** Data collection and submission support
- **UGC Guidelines:** Compliance with university regulations
- **State Medical Council:** Registration and compliance tracking
- **AADHAAR Integration:** As per government requirements





8. System Administration & Security

8.1 User Management & Security

- **Role-Based Access Control:** Granular permission management
- **Single Sign-On (SSO):** Integration with institutional authentication
- **Multi-Factor Authentication:** Enhanced security with 2FA/MFA
- **Password Policies:** Configurable password strength requirements
- **Session Management:** Automatic timeout and concurrent session control
- **Audit Logging:** Comprehensive system activity tracking
- **Data Encryption:** End-to-end data protection
- **Privacy Controls:** GDPR and data protection compliance

8.2 System Configuration

- **Institution Setup:** Multi-campus and department configuration
- **Academic Calendar:** Flexible academic year and semester setup
- **Grading Systems:** Configurable grading scales and policies
- **Workflow Management:** Custom approval and process workflows
- **Notification Templates:** Customizable email and SMS templates
- **Integration APIs:** RESTful APIs for third-party integrations
- **Backup & Recovery:** Automated backup and disaster recovery
- **Performance Monitoring:** System health and performance tracking





8.3 Mobile Application Features

- **Native Mobile Apps:** iOS and Android applications
- **Offline Functionality:** Download content for offline access
- **Push Notifications:** Real-time mobile alerts and updates
- **Biometric Authentication:** Fingerprint and face ID login
- **Camera Integration:** Document scanning and submission
- **Geolocation Services:** Location-based attendance and services
- **Progressive Web App:** Web-based mobile experience
- **Cross-Platform Sync:** Seamless data synchronization



8.4 Implementation Benefits

Module	Key Benefits	Efficiency Gains
Dashboard & Home	Improved user experience and engagement	40% reduction in navigation time
Academic Management	Streamlined course delivery and management	60% time savings in course administration
Assessment & Evaluation	Automated grading and feedback	75% reduction in assessment processing time
Performance Analytics	Data-driven decision making	50% improvement in student outcomes
Communication Hub	Enhanced collaboration and engagement	80% improvement in communication efficiency
Attendance Management	Accurate tracking and compliance	90% reduction in attendance administration
Library & Resources	Digital transformation of library services	70% increase in resource utilization
Certification	Automated credential management	95% reduction in certificate processing time



9. Implementation Methodology

9.1 Phased Implementation Plan

1

Phase 1: Foundation (Months 1-2)

- Detailed requirement analysis and gap assessment
- Master data collection and validation

2

Phase 2: Detailed Requirement and Customization (Months 2-3)

- User management and authentication module
- Course management and content delivery system
- Assessment and examination module
- Basic reporting functionality

3

Phase 3: Advanced Features (Months 4-5)

- AI engine integration and training
- Clinical modules and hospital integration
- Mobile application development
- Advanced analytics and reporting

4

Phase 4: Testing & Deployment (Months 6-8)

- Comprehensive testing (UAT, Security, Performance)
- Pilot implementation with selected departments
- Faculty and student training programs
- Data migration from existing systems



5

Phase 5: Go-Live & Stabilization (Months 9-10)

- College-wide rollout in phases
- 24/7 support during initial period
- Performance monitoring and optimization
- Feedback incorporation and fine-tuning

9.2 Training Plan

User Group	Duration	Mode	Topics Covered
IT Administrators	5 days	On-site	System administration, backup, user management
Faculty Members	3 days	Hybrid	Course creation, assessment tools, AI features
Students	1 day	Online	Platform navigation, mobile app, submission procedures
Department HODs	2 days	On-site	Analytics, reports, administrative features
Examination Cell	3 days	On-site	Exam creation, proctoring, result processing





10. Investment Details

10.1 Software Licensing Options

Option A: Perpetual License

Component	Cost (INR)	Remarks
LMS Core Platform	₹35,00,000	One-time license fee
AI Module	₹15,00,000	Including pre-trained models
Mobile Applications	₹8,00,000	Android & iOS
Implementation Services	₹12,00,000	Customization & deployment
Training & Documentation	₹5,00,000	All user groups
Total (One-time)	₹75,00,000	Plus 18% GST
Annual Maintenance (AMC)	₹11,25,000	15% of license cost/year

Option B: Subscription Model (SaaS)

Component	Monthly Cost (INR)	Annual Cost (INR)
Platform Subscription (up to 5000 users)	₹2,50,000	₹30,00,000
AI Features Add-on	₹75,000	₹9,00,000



Premium Support	₹25,000	₹3,00,000
Total Subscription	₹3,50,000	₹42,00,000
Implementation Cost (One-time): ₹15,00,000		

10.2 Infrastructure Costs (If On-Premise)

Item	Specification	Cost (INR)
Application Servers (2 Nos.)	Dell PowerEdge R740, 32 Core, 128GB RAM	₹8,00,000
Database Server	Dell PowerEdge R740, 64 Core, 256GB RAM	₹6,00,000
Storage System	10TB SAN Storage	₹5,00,000
Backup Solution	Backup server with tape library	₹3,00,000
Network Equipment	Firewall, Switches, Load Balancer	₹3,00,000
Total Infrastructure		₹25,00,000



10.3 Payment Terms

For Perpetual License:

- 30% advance on order confirmation
- 40% on delivery of software
- 20% on successful implementation
- 10% after 3 months of stable operation

For Subscription Model:

- Implementation cost: 50% advance, 50% on go-live
- Subscription: Quarterly advance payment



11. Return on Investment Analysis

11.1 Tangible Benefits

Benefit Area	Annual Savings	Calculation Basis
Paper & Printing Costs	₹15,00,000	Elimination of printed materials
Administrative Efficiency	₹20,00,000	40% reduction in admin work
Faculty Productivity	₹25,00,000	30% time saved on routine tasks
Examination Costs	₹10,00,000	Automated evaluation & processing
Infrastructure Optimization	₹8,00,000	Reduced physical space needs
Total Annual Savings	₹78,00,000	

11.2 Intangible Benefits

- Enhanced reputation as technology-enabled institution
- Improved NAAC grading and NIRF ranking
- Better student outcomes in competitive exams
- Attraction of quality faculty and students
- Compliance with digital India initiatives
- Environmental benefits from paperless operations



11.3 ROI Calculation

For Perpetual License Model:

- Total Investment (Year 1): ₹75,00,000 + ₹25,00,000 (Infra) = ₹1,00,00,000
- Annual Savings: ₹78,00,000
- Annual Maintenance: ₹11,25,000
- Net Annual Benefit: ₹66,75,000
- **Payback Period: 1.5 years**
- **3-Year ROI: 100%+**



12. Support & Maintenance

12.1 Support Structure

Three-Tier Support Model

- **Tier 1 - Help Desk:** On-site support engineers (1 resources)
- **Tier 2 - Technical Support:** Remote support from Lucknow office
- **Tier 3 - Development Team:** For complex issues and enhancements

Support Channels

- 24/7 Helpline: Dedicated toll-free number
- Email Support: support@shivakarma.in
- Ticketing System: Web-based issue tracking
- Remote Access: Secure remote troubleshooting
- WhatsApp Business: Quick query resolution

12.2 Service Level Agreement (SLA)

Issue Priority	Response Time	Resolution Time	Examples
Critical (P1)	30 minutes	4 hours	System down, exam disruption
High (P2)	2 hours	8 hours	Module malfunction, login issues
Medium (P3)	4 hours	24 hours	Report errors, minor bugs
Low (P4)	8 hours	48 hours	Enhancement requests, queries



12.3 Maintenance Services

- Regular health checks and performance optimization
- Security patches and updates
- Database maintenance and backup verification
- Quarterly review meetings
- Continuous AI model training and improvement



13. Terms & Conditions

13.1 General Terms

- **Proposal Validity:** 90 days from submission date
- **Warranty Period:** 1 year from go-live date
- **License Terms:** Perpetual license for unlimited users within the institution
- **Source Code:** As per arrangement available
- **IPR:** Custom developments will be institution's property

13.2 Exclusions

- Third-party software licenses (if any)
- Hardware and infrastructure costs
- Internet bandwidth charges
- Integration with non-standard systems
- Major customizations beyond agreed scope

13.3 Legal Compliance

- Agreement governed by Indian laws
- Disputes subject to Lucknow jurisdiction
- Compliance with IT Act 2000 and amendments
- Data protection as per Indian regulations



14. Why Choose Us

Our Unique Advantages

- **Domain Expertise:** Deep understanding of Indian medical and other education system
- **Proven Track Record:** Successful implementations in 25+ institutions
- **Local Presence:** Based in Lucknow with pan-India support
- **Cost-Effective:** Competitive pricing with flexible payment options
- **Customization Capability:** Agile development for specific requirements
- **Government Experience:** GeM registered for government projects
- **Technology Leadership:** Latest tech stack with AI capabilities
- **Long-term Partnership:** Commitment beyond implementation



15. Next Steps

1

Demo Presentation

We would be pleased to demonstrate our LMS platform at your convenience

2

Requirement Workshop

Detailed discussion to understand specific requirements and customizations

3

Pilot Implementation

Proof of concept with one department to showcase capabilities

4

Contract Finalization

Agreement signing and project kickoff





Contact Us

Shivakarma Infotech Solutions Private Limited

Corporate Office: Lucknow, Uttar Pradesh

Email: contact@shivakarma.in | coo@shivakarma.in

Phone: +91 9919955501

Website: www.shivakarma.in

Thank you for considering Shivakarma Infotech Solutions Pvt Ltd for your LMS requirements.

We look forward to partnering with you in transforming medical education through technology.

© 2025 Shivakarma Infotech Solutions Private Limited All rights reserved.

This proposal contains confidential and proprietary information.

CIN: U62099UP2025PTC223343