**1. User Management Module**

* **1.1 User Roles**
  + Admin
  + Instructor
  + Student
  + Guest
* **1.2 User Profile**
  + Personal Information
  + Course Progress
  + Achievements (Certificates, Badges)
  + Enrollment History
* **1.3 Authentication & Authorization**
  + Sign-up/Log-in (Social logins, SSO)
  + Password Management (Forgot Password, Reset)
  + Role-Based Access Control (RBAC)
  + Multi-Factor Authentication (MFA)

**2. Course Management Module**

* **2.1 Course Creation & Editing**
  + Course Builder (Drag and Drop Interface)
  + Content Upload (Videos, PDFs, Presentations, SCORM)
  + Lesson/Module Structure (Organize content into chapters or lessons)
  + Assignment & Quiz Creation (Customizable quizzes, assignments)
* **2.2 Course Organization**
  + Modules (Chapters, Topics)
  + Prerequisites (Required courses or modules before enrolling)
  + Learning Paths (Predefined pathways based on user roles)
* **2.3 Content Management**
  + Multimedia Support (Images, Audio, Video)
  + Document Management (PDFs, Word Documents, PowerPoint)
  + Interactive Tools (Quizzes, Polls, Simulations, AR/VR)
* **2.4 Course Delivery**
  + Synchronous Learning (Live Classes via Zoom, Microsoft Teams)
  + Asynchronous Learning (Pre-recorded lectures, downloadable materials)

**3. Assessment & Evaluation Module**

* **3.1 Quizzes & Exams**
  + Auto-Graded Quizzes (MCQs, True/False, Matching)
  + Custom Quizzes (Essay, Short Answers)
  + Question Bank (Reusable across courses)
* **3.2 Assignment Management**
  + Assignment Submission (File Upload, Google Docs, etc.)
  + Grading Rubrics (Instructor-defined evaluation criteria)
  + Peer Review (Students can grade each other’s work)
* **3.3 Automated Feedback**
  + Auto-generated Feedback on Quizzes
  + Instructor Feedback on Assignments
* **3.4 Gradebook**
  + Grade Tracking (by course, module, student)
  + Weighted Grades (Customize weight for quizzes, assignments, exams)

**4. Communication & Collaboration Module**

* **4.1 Forums & Discussions**
  + Course-Specific Discussion Boards
  + Peer-to-Peer Discussions
  + Instructor Moderation Tools
* **4.2 Messaging System**
  + Real-Time Chat (In-app chat between students and instructors)
  + Email Notifications (Assignment reminders, class updates)
* **4.3 Announcements**
  + Course Updates (Push notifications, email alerts)
  + System-Wide Announcements (From admin to all users)
* **4.4 Group Collaboration Tools**
  + Project Workspaces (For group assignments)
  + Collaborative Whiteboards (Real-time brainstorming)

**5. Gamification & Engagement Module**

* **5.1 Leaderboards**
  + Course-Specific (Track top performers)
  + Global (Across multiple courses)
* **5.2 Badges & Achievements**
  + Skill Badges (Earned through course completion or quiz performance)
  + Course Completion Certificates (Downloadable/Shareable)
* **5.3 Progress Tracker**
  + Visual Progress Bars (For course/module completion)
  + Milestone Notifications (Alert when completing a section or reaching goals)

**6. Analytics & Reporting Module**

* **6.1 Learner Progress Tracking**
  + Course Progress (Completion percentage, time spent)
  + Performance Metrics (Quiz scores, assignment results)
* **6.2 Instructor Dashboard**
  + Enrollment Data (Number of students, active users)
  + Engagement Insights (Which modules are most/least engaging)
  + Grade Distribution (Average grades, top and low performers)
* **6.3 Admin Reporting Tools**
  + System Usage Analytics (Active users, course views, logins)
  + Financial Reports (Course sales, subscription models)
  + Compliance Tracking (If used for mandatory training)

**7. Certification & Credentialing Module**

* **7.1 Certificate Management**
  + Customizable Templates (For instructors or admins to create course certificates)
  + Automated Certificate Issuance (On course completion)
  + Blockchain Integration (For verifiable digital certificates)
* **7.2 Badging System**
  + Earned Skill Badges (Based on course achievements)
  + Display & Share (Allow users to share badges on social media, LinkedIn)
* **7.3 Digital Wallet**
  + Store Certificates and Badges (Downloadable and sharable)
  + Digital Resume (Create and share a learning portfolio)

**8. Payment & Subscription Module**

* **8.1 Payment Gateway Integration**
  + Stripe, PayPal, or other payment methods
  + One-time Payments (Per course, per module)
  + Subscription Plans (Monthly, yearly memberships)
* **8.2 Discount & Coupon Management**
  + Custom Coupon Codes (Discount for courses)
  + Dynamic Pricing (Based on user role or course popularity)
* **8.3 Invoice & Billing**
  + Generate Invoices (For corporate clients or large purchases)
  + Auto-Billing (For subscription-based users)

**9. Mobile Learning Module**

* **9.1 Responsive Design**
  + Mobile-First Approach (Optimized for smartphones/tablets)
  + Progressive Web App (PWA) support for offline access
* **9.2 Mobile App Development**
  + Native Apps (iOS/Android)
  + Push Notifications (Reminders, updates, engagement tracking)
* **9.3 Offline Learning**
  + Course Content Download (Videos, documents for offline viewing)
  + Offline Quizzes/Assignments (Sync results once online)

**10. Security & Compliance Module**

* **10.1 User Data Privacy**
  + GDPR Compliance (European users’ data protection)
  + FERPA Compliance (For education-specific privacy)
* **10.2 Secure Authentication**
  + Password Encryption (Secure passwords and data storage)
  + Two-Factor Authentication (For added security)
* **10.3 Data Backups & Recovery**
  + Regular Backups (Automatic system backups)
  + Disaster Recovery Plans (System restoration in case of failure)

**11. System Administration Module**

* **11.1 Admin Dashboard**
  + User Management (Create, edit, delete users)
  + Course Management (Enable, disable courses)
  + Access Control (Grant permissions for different roles)
* **11.2 Content Moderation**
  + Review Forums (Flag inappropriate content)
  + Manage Comments (Approve or delete comments)
* **11.3 Server Management**
  + Cloud Hosting Integration (AWS, Azure, etc.)
  + Performance Monitoring (Load, uptime, traffic stats)

**12. Third-Party Integrations Module**

* **12.1 API Integration**
  + External Services (Zoom, Google Classroom, Microsoft Teams)
  + Data Import/Export APIs (For transferring data between systems)
* **12.2 LMS Plugins**
  + Plugin Support (For additional features like language translation or analytics)
* **12.3 CRM Integration**
  + Integrate with CRMs like Salesforce for tracking leads and enrollments.