

Advanced Hybrid E-Learning Platform – FULL DETAILED SPECIFICATION

1. Project Overview

This system is a full-scale hybrid Learning Management System (LMS) designed for online learning, physical classes, performance assessment, verified portfolios, communication, and system auditing.

It simulates real institutional platforms used by universities, training centers, and corporate academies.

Technology Stack

- UI/UX: Figma
- Frontend: HTML, CSS
- Interactivity: JavaScript
- Backend: PHP
- Database: MySQL

2. User Roles & Permissions

2.1 Student

- Register, login, manage profile
- Enroll in courses
- Access lessons & quizzes
- Attend physical classes
- Plan learning schedule
- Submit evidence (projects, labs, workshops, presentations)
- Receive performance feedback
- Build & submit portfolio
- Chat with instructors

2.2 Instructor

- Manage courses & lessons
- Schedule physical classes
- Take attendance

- Evaluate student performance
- Review submissions
- Approve / reject portfolios
- Communicate via chat

2.3 Admin

- Manage users & roles
- Moderate courses & portfolios
- View system logs
- Monitor chat & chatbot usage
- Configure global rules

3. Authentication & User Management

Features

- Secure registration
- Login/logout
- Password hashing
- Session management
- Role-based access control

Flows

- Student registers → profile auto-created
- Instructor/Admin created or approved by admin

4. Course Management System

Course Structure

- Title
- Description
- Category
- Level
- Duration

- Instructor

Instructor Capabilities

- Create/edit courses
- Publish/unpublish courses
- Upload course thumbnail

Student Capabilities

- Browse courses
- View previews
- Enroll / unenroll

5. Lesson Management

Lesson Types

- Text-based lessons
- Video lessons (link/embed)
- Downloadable documents

Tracking

- Lesson completion status
- Time spent per lesson

6. Quiz & Assessment System

Quiz Design

- Multiple-choice questions
- Single / multiple correct answers
- Time limits

Evaluation

- Automatic scoring
- Pass/fail logic
- Quiz attempts limit

7. Learning Progress & Certification

Progress Tracking

- Lesson completion percentage
- Quiz scores
- Attendance contribution

Certification Rules

- Minimum progress
- Minimum quiz score
- Minimum attendance

8. Student Profile System

Profile Data

- Photo
- Bio
- Skills
- Education
- Social links

Privacy

- Public / Private profile

9. Student Submissions System

Submission Types

- Projects
- Labs
- Workshops
- Presentations
- Physical activities

Submission Formats

- Documents

- Images
- Videos
- External links

Workflow

- Student submits → instructor reviews

10. Instructor Performance & Practical Assessment

Evaluation Criteria

- Participation
- Quality of work
- Timeliness
- Practical skills

Feedback

- Scores
- Written comments
- Supporting files

11. Student Portfolio System

Portfolio Contents

- Approved submissions
- Certificates
- Attendance statistics
- Performance records

Approval Workflow

- Submit → review → approve/reject

12. Attendance Management

Class Types

- Physical
- Online

- Hybrid

Attendance Methods

- Manual
- Session code

Rules

- Late handling
- Eligibility thresholds

13. Learning Planner & Scheduling

Planner Features

- Study session creation
- Calendar views
- Priority levels

Automation

- Sync physical classes
- Sync deadlines

14. Reminder & Notification System

Reminder Channels

- Browser notifications
- Dashboard alerts

Triggers

- Upcoming sessions
- Missed sessions

15. Chat System

Chat Features

- One-to-one chat
- File sharing
- Message status

Security

- Role-based chat access

16. Chatbot

Design

- Rule-based intents
- Predefined responses

Capabilities

- FAQs
- Schedule queries
- Guidance

17. System Logs

Logged Events

- Authentication
- CRUD operations
- Attendance
- Approvals

Access

- Admin only

18. Dashboards

Student Dashboard

- Progress
- Schedule
- Notifications

Instructor Dashboard

- Class management
- Evaluations

Admin Dashboard

- Monitoring
- Logs

19. Database Design

Core Principles

- Normalization
- Foreign keys
- Auditability

20. Team Responsibilities

Clearly divided across UI/UX, JS, PHP, and Admin groups.

21. Final Educational Value

This project teaches full-stack development, real academic workflows, system auditing, and professional collaboration.