

# University of Sierra Leone Website - Key Features Overview

## Core Management System

A comprehensive Content Management System (CMS) built with PHP and MySQL, featuring a modular architecture with separate admin panel and public-facing interfaces.

## Complaints Management System

### Public-Facing Features:

- **Complaint Submission Portal:** Users can submit complaints with detailed forms including:
  - Ticket number generation (Format: CMP-YYYY-####)
  - Category selection (academic, administrative, facilities, etc.)
  - File attachment support
  - Anonymous and named complaint options
  - Priority levels (low, medium, high, critical)
- **Complaint Tracking:** Real-time status tracking with:
  - Unique ticket numbers for reference
  - Status updates (pending, in\_progress, resolved, closed)
  - Communication history between users and administrators
  - Email notifications for status changes

### Administrative Features:

- **Complaint Dashboard:** Comprehensive management interface with:
  - Filter and search capabilities
  - Bulk operations for multiple complaints
  - Assignment to staff members
  - Response templates
  - Analytics and reporting
  - Export functionality

### Technical Implementation:

- PHP-based ticket generation system
- Database-driven status management
- File upload validation and security
- CSRF protection and input sanitization

- Mobile-responsive interface using Tailwind CSS

## 📄 AI Chatbot System

### Core Functionality:

- **Self-Service AI Assistant:** Powered by Ollama and Llama 3 model
- **University-Specific Responses:** RAG (Retrieval Augmented Generation) system that:
  - Searches university database for relevant information
  - Provides context-aware responses about programs, admissions, fees
  - Maintains professional university tone
  - Filters non-university related queries

### Features:

- **Real-Time Conversation:** Modern chat interface with:
  - Typing indicators
  - Message history
  - Quick action buttons for common queries
  - Mobile-responsive design
- **Knowledge Base Integration:** Searches across:
  - Programs and courses database
  - Admissions information
  - News and events
  - Campus information
  - Fee structures

### Security & Performance:

- Rate limiting (10 requests/minute per IP)
- Input validation and XSS protection
- Conversation logging for analytics
- Response time monitoring
- Error handling and fallback responses

## 👤 User Management System

### Authentication & Security:

- **Multi-Factor Authentication (MFA):** Enhanced security with:
  - Email-based verification codes
  - Backup codes for recovery

- Session management
- Secure password policies

### **User Profiles:**

- **Personal Dashboard:** Centralized user hub featuring:
- Profile management
- Application tracking
- Complaint history
- Notification preferences
- Document uploads

### **Role-Based Access:**

- **Permission System:** Granular access control with:
- Student, faculty, and admin roles
- Department-specific permissions
- Feature-level access control
- Audit logging

## **Digital Library System**

### **Multi-Campus Libraries:**

- **Campus-Specific Libraries:** Separate library portals for:
- Fourah Bay College (FBC) Library
- COMAHS Library
- IPAM Library
- Institute of Public Administration (IPA) Library

### **Digital Features:**

- **Online Resources:** 24/7 access to:
- Digital collections and databases
- E-books and journals
- Research publications
- Course materials
- Multimedia resources

### **Library Management:**

- **Admin Interface:** Comprehensive management tools for:

- Resource cataloging
- User access management
- Download tracking
- Usage analytics

## Academic Management

### Program Management:

- **Course Catalog:** Detailed program information including:
- Undergraduate and postgraduate programs
- Professional studies
- Distance learning options
- Program requirements and duration
- Fee structures

### E-Learning Platform:

- **Online Courses:** Comprehensive distance education with:
- Course materials and resources
- Assignment submission
- Progress tracking
- Interactive learning modules
- Faculty-student communication

### Academic Calendar:

- **Event Management:** University-wide calendar featuring:
- Academic schedules
- Examination periods
- Holidays and breaks
- Registration deadlines
- Campus events

## Career Services & Jobs

### Job Portal:

- **Career Opportunities:** Comprehensive job board with:
- University positions
- External job postings
- Internship opportunities

- Career guidance resources
- Application tracking

## Application Management:

- **Job Applications:** Streamlined application process with:
- Online application forms
- Resume upload
- Application status tracking
- Communication with employers
- Interview scheduling

## Governance & Administration

### Administrative Structure:

- **University Governance:** Management of:
- University leadership
- Faculty and department management
- Policy documentation
- Committee management
- Administrative procedures

### Campus Management:

- **Multi-Campus System:** Coordination of:
- Multiple campus locations
- Campus-specific information
- Facility management
- Campus events and activities

## Technical Infrastructure

### Security Features:

- **Web Application Firewall (WAF):** Protection against:
- SQL injection attacks
- Cross-site scripting (XSS)
- CSRF attacks
- Rate limiting and DDoS protection

### Performance Optimization:

- **Caching System:** File-based caching for:
  - Database query results
  - Dynamic content
  - Image optimization
  - Minified CSS/JS

## Monitoring & Analytics:

- **System Monitoring:** Comprehensive tracking of:
  - User activity and engagement
  - System performance metrics
  - Error logging and reporting
  - Usage statistics

## Mobile Responsiveness

### Responsive Design:

- **Mobile-First Approach:** Optimized for all devices with:
  - Touch-friendly interfaces
  - Adaptive layouts
  - Fast loading times
  - Progressive web app features

## Content Management

### Dynamic Content:

- **Content Updates:** Easy management of:
  - News and announcements
  - Events and activities
  - Academic information
  - Policy documents
  - Multimedia content