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Custom LMS for Trade School

SERVICE
Software

YEAR
2024

A custom learning management system designed for a Florida trade school, serving 800 students. It facilitates course delivery, assessments, certifications, and provides instructor dashboards, enhancing educational efficiency and student engagement.

Industry: Education Client: Confidential Service: Software

Completion rate 67% to 89%	**75% less instructor grading time**	**34% enrollment increase**	**12 hrs per week admin time saved**

The Challenge

A Florida trade school with 800 enrolled students across HVAC electrical and plumbing programs was delivering course materials as PDF email attachments. Assessments were paper-based and manually graded. There was no way for students to track their progress or for instructors to identify students falling behind until it was too late. Certification tracking was done in a spreadsheet. The school was losing prospective students to competitors with modern online learning platforms.

Our Solution

Built a full LMS in ASP.NET Core 8 with Blazor. Students get a personalized dashboard showing course progress upcoming assessments and certification status. Course content is delivered as structured modules with video embeds PDF resources and quizzes. The assessment engine supports multiple choice short answer and timed tests with automatic grading. Instructors get real-time class analytics showing completion rates quiz scores and at-risk students flagged automatically. Certificates are generated as branded PDFs via QuestPDF and emailed automatically on completion.

The Results

Student course completion rates increased from 67% to 89% in one semester. Instructor time spent on grading dropped 75% with automated assessments. The school saw a 34% increase in new enrollments in the following intake cycle citing the modern platform in student surveys. Administrative staff saved 12 hours per week on certification tracking. Zero paper assessments since launch.

Tech Stack

ASP.NET Core 8 · Blazor Server · SQL Server · QuestPDF · Azure Blob Storage · Azure App Service · SignalR

Ready to start a similar project?

info@deselt.com · deselt.com · St. Lucie County, FL