COURSE SYLLABUS

AI Workflows for AEC Professionals Course Online

This course explores the intersection of artificial intelligence and the built environment, covering practical applications of AI across design, documentation, bidding, and construction management. Students will develop hands-on experience building automation tools and scripts tailored to real AEC workflows.

> Group classes (Live Online) and onsite training are available for this course. For more information, email partnerships@vdci.edu or visit: https://vdci.edu/courses/ai-workflows-for-aec-professionals-course-online



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Course Outline

Lesson 1: Pre-Design & Programming

- Site Analysis & Zoning
- AI-Driven Building Programs
- Intro to Data Formatting
- Assignment: Graded Discussion Forum Post

Lesson 2: Schematic Design

- Iterative & Generative Design
- Real-time Cost Estimating
- Visual Concept Generation
- Assignment: Hands-On Quiz – Prompting Techniques

Lesson 3: Construction Documentation

- Scripting for CAD/BIM
- AI Code Studies
- Generating Sheet Lists & Notes
- Assignment: Midterm Submission – Spec Analysis & RFI Log

Lesson 4: Bidding & Proposals

- Bid Leveling with AI
- Writing Technical Proposals
- Qualification Evaluation
- Assignment: Hands-On Quiz – Predictive Analysis

Lesson 5: Construction Management

- AI Scheduling
- Field Report Analysis
- Real-time Budget Tracking
- Assignment: Hands-On Quiz – Pattern Techniques

Lesson 6: Finalizing the Project

- Commissioning Logs
- Post-Occupancy Scripts
- Deploying the App UI
- Assignment: Final Submission – Complete AI Web-App & Documentation