COURSE SYLLABUS

AI for Business Professional Certificate Program

Learn to design, build, and deploy AI-powered business applications with no prior coding experience, graduating with a portfolio of live tools across productivity, knowledge, revenue, finance, and operations.

Group classes (Live Online) and onsite training are available for this course. For more information, email partnerships@vdci.edu or visit: https://vdci.edu/certificates/ai-for-business-professionals-certificate-program



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Course Outline

This package includes these courses

- AI Coding Tools & App Development Course Online (60 Hours)
- AI Application Architecture & Strategy Course Online (60 Hours)
- Personal Productivity Portfolio Development Course Online (30 Hours)
- Knowledge-Base Chatbot Portfolio Development Course Online (30 Hours)
- Marketing & Sales Portfolio Development Course Online (60 Hours)
- Finance & Compliance Portfolio Development Course Online (60 Hours)
- Operations & Client Management Portfolio Development Course Online (60 Hours)

AI Coding Tools & App Development Course Online

Learn to build, test, and deploy full-stack web applications with AI coding tools, covering prompting, version control, databases, authentication, security, and hosting.

- Use AI coding tools confidently for real, multi-step development work
- Prompt and steer AI with context setting, planning, review, and recovery techniques
- Work with Git and GitHub for version control, branching, and code review
- Understand web development fundamentals: HTML, CSS, JavaScript, APIs, front end, and back end
- Build full-stack applications with databases, authentication, and external APIs
- Connect external services through MCP integrations and orchestrate sub-agents
- Debug, test, and secure an application before release
- Deploy production-ready applications to a live public URL

AI Application Architecture & Strategy Course Online

Learn how production AI business applications are actually designed: data modeling, systems integration, retrieval-augmented generation, agents, guardrails, and the security practices business data demands.

- Model business data and design databases that support real workflows
- Integrate email, calendars, analytics, CRM, and accounting via APIs, OAuth, webhooks, and MCP
- Apply advanced prompting techniques for reliable, repeatable results
- Design retrieval-augmented generation over business documents
- Build multi-step agents and understand their reliability and cost trade-offs
- Evaluate AI output and put guardrails around it
- Apply authentication, secrets management, PII protection, and access control
- Scope a business problem and communicate the solution to non-technical stakeholders

Personal Productivity Portfolio Development Course Online

Design, build, and deploy a working document summarization and action-item dashboard, your first live application in the portfolio.

- Scope a productivity problem into a buildable application
- Ingest, store, and organize uploaded documents
- Use AI to summarize documents and extract key points and action items
- Structure extracted content so it stays queryable
- Design a clean, scannable dashboard interface
- Add authentication and protect stored content
- Deploy the application to a live public URL
- Document the build and demonstrate it to a non-technical audience

Knowledge-Base Chatbot Portfolio Development Course Online

Build and deploy a retrieval-augmented chatbot that answers from your own documents, manuals, and policies, suitable for customer support or internal knowledge.

- Design a retrieval-augmented generation pipeline end to end
- Ingest and chunk documents, manuals, and policies for retrieval
- Generate, store, and query embeddings
- Assemble retrieved context into prompts that produce grounded answers
- Cite sources so answers can be verified
- Handle unanswerable questions rather than inventing a response
- Keep a knowledge base current as source documents change
- Deploy the chatbot for customer-facing or internal use

Marketing & Sales Portfolio Development Course Online

Build and deploy revenue-facing applications: analytics-to-insight reporting, AI content generation, a sales CRM, and automated outreach.

- Scope revenue-facing problems into buildable applications
- Pull analytics data and turn it into readable business insight

- Generate on-brand marketing content programmatically
- Build a CRM with contact management and deal tracking
- Automate outreach sequences with sensible triggers and limits
- Connect external services through APIs and MCP integrations
- Deploy both applications live with authentication and a hosted database
- Document the architecture and demo the tools to stakeholders

Finance & Compliance Portfolio Development Course Online

Build and deploy a financial dashboard with calculations computed in code, plus an AI-assisted document and agreements hub with compliance workflows.

- Compute income, expenses, revenue growth, and profitability programmatically
- Visualize financial data through interactive charts and dashboards
- Understand when to compute in code and when to use AI
- Draft employment offers, contractor agreements, NDAs, and vendor contracts with AI assistance
- Track documents through review and approval workflows
- Apply access control and audit trails to sensitive records
- Handle personally identifiable and financial data responsibly
- Deploy both applications live with authentication

Operations & Client Management Portfolio Development Course Online

Build and deploy an agentic operations automation hub and a client-facing practice-management system with scheduling, billing, and a client portal.

- Design multi-step agentic workflows that run on schedules and triggers
- Decide what an agent handles unattended and when it escalates to a person
- Automate internal operations tasks to reduce manual effort
- Build scheduling and calendar integration
- Handle billing and invoicing workflows
- Deploy a secure client-facing portal with appropriate permissions
- Design for graceful failure in systems outside users depend on
- Present a completed portfolio of deployed business applications