

## INSTRUCTOR-LED TRAINING

# Course Catalog

Live instructor-led training across applied AI, cloud and DevOps, data engineering, architecture, and modern software development. Taught by a working software architect and 35-year educator. Every course is delivered in person or virtually and can be customized to your team.

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Generated 2026-07-02

### How to read levels

**Foundation:** no prior experience needed

**Practitioner:** some working experience assumed

**Advanced:** for experienced practitioners

### Categories

1. Applied and Generative AI 17 courses
2. AI for Business and Non-Technical Audiences 10 courses
3. Engineer-to-Architect and Durable Thinking Skills 11 courses
4. Cloud, DevOps, and Containers 12 courses
5. Data Engineering and Analytics 10 courses
6. Software Development and Engineering Practices 13 courses

CATEGORY 1

## Applied and Generative AI

Hands-on generative AI for technical audiences, from prompting through building, agentic systems, AI-assisted development, and productionizing, plus an AI automation and no-code bridge.

### Advanced AI Coding Agent Techniques

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Advanced workflows with AI coding agents: subagents, custom commands, larger refactors, and agent-driven development.

### AI-Assisted Refactoring and Code Quality

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Use AI tools to refactor safely and raise code quality, with techniques for legacy code, tests, and review.

### Building Agentic AI with the Model Context Protocol (MCP)

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Build agents that connect to tools and data through the Model Context Protocol, with hands-on MCP server and client work.

### Building AI-Powered Apps with Microsoft Power Platform

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Build AI-enabled apps and flows on Microsoft Power Platform using Power Apps, Power Automate, and Copilot Studio.

### Building Generative AI Applications

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Hands-on development of LLM-powered applications using the OpenAI and Anthropic APIs, from first call to a working feature.

### Building Multi-Agent Systems

Level: Advanced • 2 days (expandable to 3) • Virtual, In-person

Design and orchestrate multiple cooperating agents, covering roles, communication, and coordination patterns.

### Citizen Development with AI Coding Agents

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

Enable non-developers to build useful tools with AI coding agents, safely and within guardrails.

### Deploying and Scaling Generative AI Applications

Level: Advanced • 2 days (expandable to 3) • Virtual, In-person

Deploy LLM applications to production and scale them, covering hosting options, cost, latency, and reliability.

### Developing Advanced Generative AI Applications

Level: Advanced • 2 days (expandable to 3) • Virtual, In-person

Advanced patterns for production LLM applications: structured output, tool use, streaming, and robust error handling.

### Evaluating and Monitoring Generative AI Applications

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

How to measure and monitor LLM application quality: evaluation methods, test sets, and production observability.

## Foundations of AI Coding Assistants (GitHub Copilot and Claude Code)

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

Get productive with AI coding assistants: effective use of GitHub Copilot and Claude Code in everyday development.

## Foundations of Prompt Engineering

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

The core techniques of writing effective prompts, with patterns and hands-on practice for getting reliable results from LLMs.

## Introduction to Agentic AI

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

What agentic AI is, how agents plan and use tools, and where autonomous systems help or hurt.

## Introduction to Generative AI

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

A plain-language introduction to how generative AI and large language models work, what they can and cannot do, and where they fit in real work.

## Practical AI Workflow Automation with Zapier, Make, and n8n

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Automate real work with AI using no-code tools, building practical workflows in Zapier, Make, and n8n.

## Prompt Engineering for Developers

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Prompting techniques aimed at developers: structured prompts, tool and function calling, and integrating prompts into applications.

## Retrieval-Augmented Generation (RAG) with Vector Databases

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Build production-grade RAG systems that ground large language models in your own data. Hands-on labs cover embeddings, chunking, vector databases, retrieval pipelines, evaluation, and the security and cost concerns of running RAG in production.

## CATEGORY 2

# AI for Business and Non-Technical Audiences

AI literacy, strategy, practical productivity, and responsible AI and governance for leaders and knowledge workers.

## AI Fundamentals for Business Leaders

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

A non-technical grounding in AI for leaders: what it is, what it changes, and how to think about applying it.

## AI Governance for Leaders

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Establish and lead AI governance in your organization: policies, risk, roles, controls, and accountability, drawing on the major governance frameworks rather than any single standard.

## AI Strategy for Executives

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Building and leading an AI strategy: opportunities, risks, roadmap, and organizational readiness.

## Everyday AI: Boosting Productivity with ChatGPT and Claude

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

Hands-on productivity with ChatGPT and Claude: practical use cases for writing, analysis, and daily work.

## Generative AI for Business Leaders

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

How generative AI creates business value, with the strategic and operational questions leaders need to answer.

## Generative AI for Every Employee

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

Practical AI literacy for the whole workforce: everyday uses, good habits, and where to be careful.

## Getting Value from Microsoft 365 Copilot

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

Get real value from M365 Copilot across Word, Excel, Outlook, and Teams, with role-based use cases.

## Leading and Building AI-Powered Teams

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Lead teams through AI adoption: change management, new workflows, and building an AI-capable organization.

## Prompt Writing for Business Users

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

A non-technical guide to writing prompts that get useful, reliable results for business tasks.

## Responsible AI and AI Ethics

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

The principles and practices of responsible AI: fairness, transparency, risk, and ethical use.

CATEGORY 3

## Engineer-to-Architect and Durable Thinking Skills

The transition from developer to architect: architecture fundamentals, design and modeling, enterprise architecture, and the durable thinking skills that keep technologists valuable through change.

### Design Patterns in Practice

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

The classic design patterns applied to real code, with guidance on when each helps and when it hurts.

### Design Thinking for Engineers

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

A human-centered, iterative approach to solving the right problem, adapted for engineers.

### Designing Microservices Architectures

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Design microservices well: service boundaries, communication, data, and the tradeoffs versus a monolith.

### Domain-Driven Design

Level: Advanced • 2 days (expandable to 3) • Virtual, In-person

Model complex domains with DDD: entities, aggregates, bounded contexts, and strategic design.

### Enterprise Architecture with TOGAF

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Enterprise architecture using the TOGAF standard: the ADM, artifacts, and how EA delivers value. Can align to certification.

### From Developer to Architect

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

The transition every senior developer eventually faces. Learn what software architects actually do, how to think in tradeoffs and architecture characteristics, how to make and defend decisions, and how to lead and communicate as an architect, with a personal roadmap to get there.

### Fundamentals of Software Architecture

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

The core of modern software architecture: characteristics, styles, components, and making sound structural decisions.

### Software Architecture Patterns and Styles

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

A tour of major architecture styles and patterns, with the tradeoffs that guide when to use each.

### Technical Communication and Influence for Architects

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

The communication and influence skills architects live or die by: presenting, persuading, and leading without authority.

### The Uncommon Engineer: Staying Valuable Through Technology Shifts

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

The durable thinking skills that keep technologists valuable through every technology shift. Doubles as a keynote.

## Thinking Like an Architect: Problem-Solving and Systems Thinking

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

The mental models behind good architecture: framing problems, systems thinking, and reasoning in tradeoffs.

## CATEGORY 4

# Cloud, DevOps, and Containers

Azure-led cloud foundations, the Azure platform, containers and Kubernetes, and DevOps and CI/CD.

## AWS Cloud Practitioner Essentials

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

Foundational AWS concepts aligned to the Cloud Practitioner certification: core services, security, and pricing.

## Building Applications on Azure (App Service and Functions)

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Build and deploy applications on Azure using App Service and Functions, aligned to AZ-204 topics.

## CI/CD with GitHub Actions

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Build continuous integration and delivery pipelines with GitHub Actions, from first workflow to deployment.

## Cloud Computing Essentials

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

A vendor-neutral grounding in cloud computing: service models, deployment models, and cloud-native basics.

## Cloud-Native Development on Azure

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Design and build cloud-native applications on Azure: containers, managed services, and scalable patterns.

## Deploying to Azure Kubernetes Service (AKS)

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Run Kubernetes on Azure with AKS: cluster setup, deployments, scaling, and operations.

## DevOps Foundations

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

The principles and practices of DevOps: culture, flow, feedback, and the delivery pipeline.

## Implementing DevOps with Azure DevOps (AZ-400)

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Implement end-to-end DevOps with Azure DevOps, aligned to the AZ-400 certification.

## Infrastructure as Code with Terraform

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Provision and manage infrastructure as code with Terraform: configuration, state, modules, and workflows.

## Introduction to Docker and Containers

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

Container fundamentals with Docker: images, containers, registries, and building and running your first services.

## Kubernetes Fundamentals

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Core Kubernetes concepts and hands-on work: pods, deployments, services, networking, and storage.

## Microsoft Azure Fundamentals (AZ-900)

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

Cloud and Azure fundamentals aligned to the AZ-900 certification: core services, pricing, and governance.

## CATEGORY 5

# Data Engineering and Analytics

Data foundations, data engineering on Azure, data warehousing and analytics, and NoSQL and non-relational data.

## Building ETL Pipelines with Azure Data Factory

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Build and orchestrate ETL and ELT pipelines with Azure Data Factory, from ingestion to transformation.

## Data Engineering on Microsoft Azure (DP-203)

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

End-to-end data engineering on Azure aligned to DP-203: storage, pipelines, and processing.

## Data Engineering with Databricks

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Build data engineering pipelines on Databricks: Spark, Delta Lake, and production-ready workflows.

## Data Warehousing and Dimensional Modeling

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Design data warehouses and dimensional models: star schemas, facts, dimensions, and ETL loading.

## Introduction to Vector Databases for AI

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

How vector databases store and search embeddings to power semantic search and RAG.

## Microsoft Azure Data Fundamentals (DP-900)

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

Core data concepts on Azure aligned to DP-900: relational, non-relational, and analytics workloads.

## Modern Analytics with Azure Databricks

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Deliver analytics on Azure Databricks: notebooks, SQL analytics, and turning data into insight.

## Relational Database Design

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Design sound relational databases: normalization, keys, relationships, and practical schema modeling.

## SQL Querying and T-SQL Fundamentals

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

Write effective SQL: querying, joins, aggregation, and the T-SQL essentials for working with data.

## Working with NoSQL Databases (MongoDB and Cosmos DB)

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Work with document and non-relational data using MongoDB and Azure Cosmos DB, and know when to choose NoSQL.

CATEGORY 6

## Software Development and Engineering Practices

Programming foundations, the .NET and C# stack, modern web and JavaScript, and engineering practices like testing and clean code.

### Agile Development and Scrum for Engineering Teams

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Deliver software the agile way: Scrum roles and events, backlogs, sprints, and Kanban flow.

### Building REST APIs with ASP.NET Core Web API

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Design and build RESTful APIs with ASP.NET Core Web API, including routing, models, and documentation.

### Building Web Applications with ASP.NET Core MVC

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Build server-rendered web applications with ASP.NET Core MVC: controllers, views, models, and routing.

### Clean Code and Code Reviews

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Write cleaner, more maintainable code and run effective code reviews that raise team quality.

### Data Access with Entity Framework Core

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Access and manage data with Entity Framework Core: modeling, querying, migrations, and performance.

### Full-Stack Development with .NET and React

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Build a full-stack application with a .NET back end and a React front end, wired together end to end.

### Introduction to Programming

Level: Foundation • 2 days (expandable to 3) • Virtual, In-person

A first course in programming: core concepts, logic, and writing your first working code.

### Modern JavaScript (ES6+)

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Modern JavaScript from ES6 onward: let and const, arrow functions, modules, promises, and async/await.

### Object-Oriented Programming with C#

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Object-oriented programming with C#: classes, inheritance, interfaces, and solid OO design.

### Python Programming

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Practical Python programming: syntax, data structures, functions, and building real scripts and programs.

### Server-Side Development with Node.js and Express

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Build server-side applications and APIs with Node.js and Express: routing, middleware, and data.

### Test-Driven Development and Automated Testing

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Practice test-driven development and automated testing across unit, integration, and UI levels.

## TypeScript for JavaScript Developers

Level: Practitioner • 2 days (expandable to 3) • Virtual, In-person

Add type safety to JavaScript with TypeScript: types, interfaces, generics, and practical adoption.