PL-400 Training Course (10 Days - 40 Hours)

Day 1: Microsoft Power Platform & Dataverse Deep Dive

- Overview of Microsoft Power Platform and PL-400
- Developer environment setup: Environments, Solutions, Layers, Security Model, Licenses.
- Dataverse Tables, Columns (Calculated, Rollup), Relationships
- Security: Role-based access, Field-level, Team security
- Business Rules, Auditing, Compliance controls
- Hands-on: Create tables, columns, relationships and business rules

Day 2: Model-Driven App Development

- Create Model-Driven App with navigation and sitemap
- Configure Forms: Main, Quick View, Multi-tab, Conditional visibility
- Configure Views, Charts and Dashboards
- Command bar customization using JavaScript and Power Fx
- BPF, Form Customization, Lab work
- Hands-on: Build a functional model-driven app from scratch

Day 3: Canvas App Development - Fundamentals

- Introduction to Canvas Apps and Power Fx
- UI design: Responsive layouts, Themes, Accessibility
- Controls: Galleries, Forms, Dropdowns, Custom layouts
- Data sources: Dataverse, SharePoint, SQL Server
- Collections and Variables for app state management
- Hands-on: Build Canvas App with multiple screens and connected data

Day 4: Canvas App Advanced Development

- Component libraries and reuse strategies
- Role-based UI, Conditional formatting, Offline support (SaveData/LoadData)
- Delegation limits and large data performance
- App performance profiling using App Checker and Monitor
- Hands-on: Optimize a complex canvas app with performance and offline capabilities

Day 5: Power Pages and Power BI for Developers

- Power Pages: Site structure, Web Roles, Permissions, Form/Lists
- Power BI for Developers: Datasets, Embedding in MDA and Canvas Apps
- Paginated reports and dynamic filtering via Power BI APIs
- Security and real-time data in Power BI visuals

- Hands-on: Embed Power BI dashboard in a model-driven app and Power Page

Day 6: Power Automate Deep Dive

- Dataverse Triggers and Actions
- Advanced Expressions, Error Handling, Parallel Branching
- Approvals, Adaptive Cards in Teams
- Custom Connectors with OAuth2 and Swagger
- Hands-on: Build a robust approval workflow using Dataverse and Custom Connector

Day 7: Client-side and PCF Development

- JavaScript client scripting for Model-driven Apps
- Form event handling: OnLoad, OnChange, OnSave
- Introduction to Power Apps Component Framework (PCF)
- PCF control lifecycle and manifest configuration
- Hands-on: Create and deploy a PCF control

Day 8: Server-side and Azure Integrations

- Dataverse Plug-ins: Pre/Post, Secure Configs, Error Handling
- Custom APIs, Business Events, Azure Function integrations
- Using Dataverse Web API and C# SDK for CRUD operations
- Hands-on: Build a plug-in, call an Azure Function from Dataverse

Day 9: Integration, Virtual Tables & CoE Starter Kit

- External Integration Patterns: Logic Apps, Virtual Tables
- Authentication strategies: OAuth2, Azure AD, API Permissions
- Overview of CoE Starter Kit and key components (Audit, Nurture, Monitor)
- Hands-on: Connect Virtual Table to external data source, Install and configure CoE Starter Kit dashboards

Day 10: CI/CD, ALM and Capstone Project

- Application Lifecycle Management: Managed vs Unmanaged, Layering
- Environment Variables, Connection References, Solution Checker
- CI/CD Pipelines with Azure DevOps and GitHub Actions
- Hands-on: Setup a full DevOps pipeline for Power Platform
- Capstone Project: Build end-to-end Power Platform solution (Canvas + MDA + Power BI + Flow + PCF)
- Wrap-up and PL-400 Exam Preparation Q&A