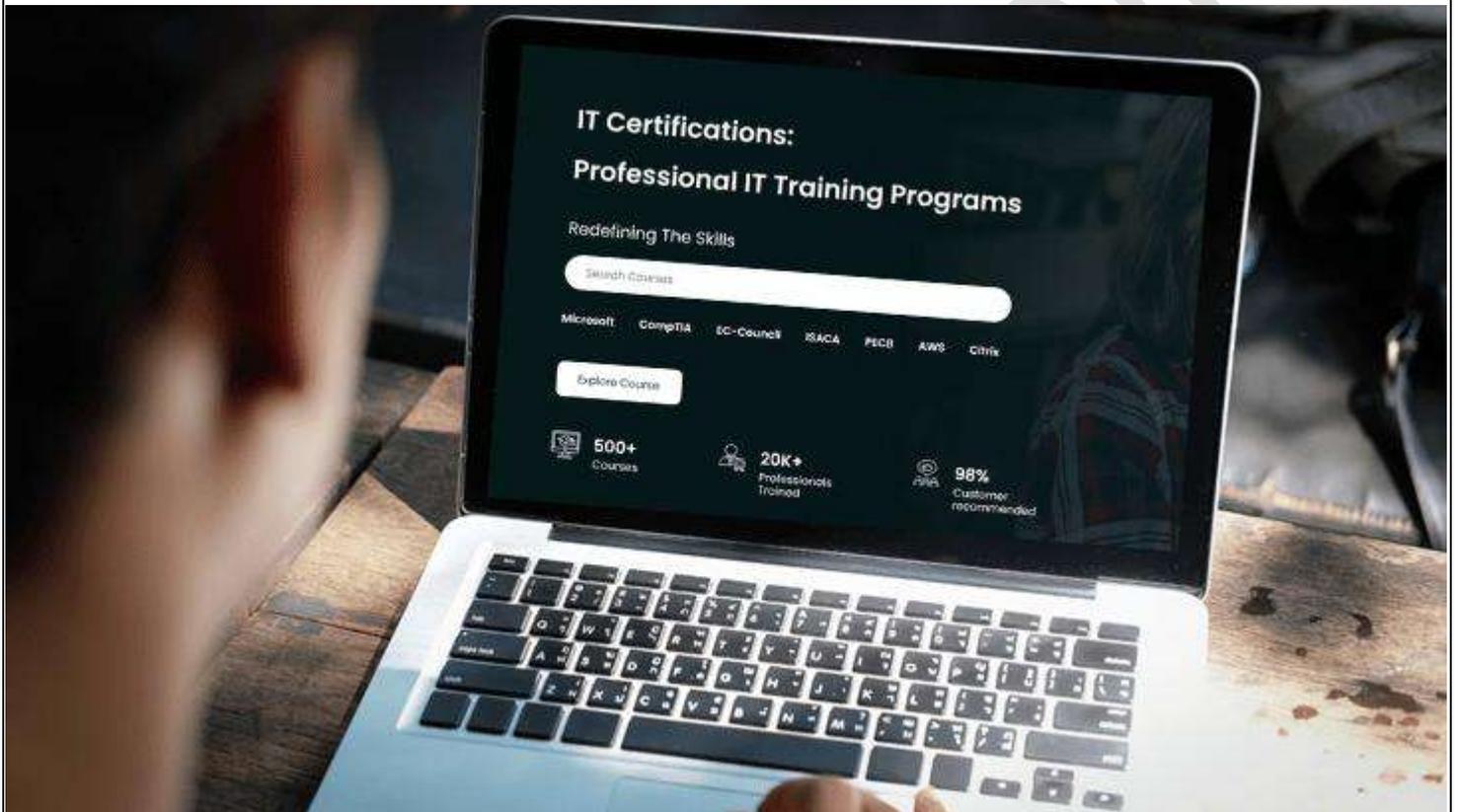# PL-400T00: MICROSOFT POWER PLATFORM DEVELOPER TRAINING

Duration: 5 Days

Course Description

PL-400T00: Microsoft Power Platform Developer Training is for professionals who are willing to learn about helping organizations in simplifying, and automating business and procedures. This program is for professionals who have the zeal to design, develop, secure, and extend MS Power Platform solutions.

In order to gain this certification, one should make solution components, counting app enhancements, system integrations, customer user experience, and custom process automation.

Besides, your professional background one must count development experience using C#, JSON, JavaScript, NET, HTML, Azure, Microsoft 365, Power BI, and ASP.NET.

This training is designed based on the objectives on the course variant PL-400T00-A.

Who should attend this course?

- Candidates pursuing this course will develop, design, and troubleshoot Power Platform Solutions. They would also implement components of a solution that deals with application enhancements, custom user experience, system integrations, custom process automation, custom visualization, and data conversions.
- By completing this course candidates will gain applied knowledge of Power Platform Service, including an in-depth understanding of capabilities, boundaries, and constraints.
- Given below are professionals who can use Microsoft Power Platform Developer Training to upskill their current positions:
    - IT Professionals
    - Technical Consultants
    - Application Developers
    - System Administrators
    - Business Analysts
    - Technical Consultants
    - Data Analysts
    - Technical Project Managers
    - DevOps Engineers
    - CRM Technical Consultants
    - Dynamics 365 Developers

What you will learn

- Create a technical design
- Configure Common Data Service
- Create and configure Power Apps
- Configure business process automation
- Extend the user experience
- Extend the platform
- Develop Integrations

Prerequisites

- Candidates pursuing this course should have an introductory knowledge of the Power Platform.
- Candidates pursuing should have development experience. Their development experience should include JavaScript, JSON, TypeScript, C#, HTML, Microsoft Azure, Microsoft 365, RESTful Web Services, ASP.NET, and Power BI.

Recommended

- [PL-900T00: Microsoft Power Platform Fundamentals](#)

Curriculum

Module 1: How to build your first model-driven app with Dataverse

- Discover the value and key features of Dataverse
- Learn about the value and key features of model-driven apps
- Explore sample model-driven template apps

Module 2: Get started with model-driven apps in Power Apps

- Model-driven app design
- Creating a model-driven app
- Lab: Control security when sharing model-driven apps
- Lab: Create a model-driven app

Module 3: Manage tables in Dataverse

- Tables in Dataverse
- Types of tables that are available in Dataverse
- Creating a custom table
- Enabling attachments within a table
- Which licensing requirements to apply to use each type of table
- Lab: Create a new custom table and enable attachments

Module 4: Create and manage columns within a table in Dataverse

- What a column is in Dataverse
- The types of columns that are available in Dataverse
- How to add a column to a table
- What a primary name column is in Dataverse
- How to identify restrictions that are associated with columns
- How to create an auto-numbering column
- How to create an alternate key

Module 5: Working with choices in Dataverse

- Learn about choices
- Explore the standard choices
- Create a new choice or modify an existing one
- Lab: Create a new choice or modify an existing choice

Module 6: Create a relationship between tables in Dataverse

- Why you should segment data that is used by your solutions into many tables
- Why you need to relate one table to another
- How to build relationships between tables
- How to select the proper relationship type when you're building solutions with Dataverse
- Lab: Create two tables and relate them by using a one-to-many relationship

Module 7: Define and create business rules in Dataverse

- Define business rules in Dataverse
- Create and manage business rules in Dataverse
- Lab: Create a business rule

Module 8: Create and define calculation or rollup columns in Dataverse

- Define a rollup column
- Create a rollup column
- Identify a calculation column
- Create a calculation column
- Define a formula column
- Lab: Create a rollup column
- Lab: Create a calculated column

Module 9: Get started with security roles in Dataverse

- Learn about security roles and apply them to users in an environment
- Learn how to add users to an environment
- Understand security concepts in Dataverse
- Identify default security roles
- Create a custom role
- Create a custom security role and assign it to entities and users
- Learn how to configure Dataverse teams for security
- Learn how to configure Dataverse group teams for security
- Lab: Create a custom role

Module 10: Get started with Power Apps canvas apps

- Explore how Power Apps can make your business more efficient
- Use different technologies to perform different tasks in Power Apps
- Build an app in Power Apps in different ways
- Create your first app from data in an Excel workbook
- Lab: Create your first app in Power Apps
- Lab: Create an app from Excel using Copilot

Module 11: Customize a canvas app in Power Apps

- Change the layout of a gallery
- Change the data that a control portrays
- Modify a form control to show different data fields
- Learn about gallery and form controls
- Add a screen
- Learn how to modify label properties by using basic formulas
- Add labels
- Learn how to create basic screen navigation
- Lab: Introduction to formulas in canvas apps
- Lab: Create basic screen navigation for a canvas app

Module 12: Manage apps in Power Apps

- Learn how to view and restore app versions
- Explore how to share an app, including permissions and notifications
- Learn about what environments are, how to create them, and how to manage security
- Find more information about Power Apps
- Lab: Manage app versions in Power Apps
- Lab: Share apps in Power Apps
- Lab: Understand environments in Power Apps

Module 13: Navigation in a canvas app in Power Apps

- Gain a greater understanding of the Navigate and Back functions

- Learn how to use screen transitions in an app
- Learn how to preview and modify an app to fit various form factors
- Gain hands-on experience in building navigations inside an app
- Learn how to use other controls for app navigation
- Lab: App navigation practice

Module 14: How to build the User Interface in a canvas app in Power Apps

- Understand the basics of building the UI through themes, icons, control customization, and images
- Use personalization in a canvas app
- Learn how to preview and modify an app to fit different form factors
- Lab: Create and adjust UI for a new canvas app

Module 15: Use and understand Controls in a canvas app in Power Apps

- Understand how to use controls in a canvas app
- Use the different types of controls
- Understand how Galleries and Forms relate to controls
- Lab: Create a canvas app with unique controls
- Lab: Upload file to SharePoint document library

Module 16: Document and test your Power Apps application

- Learn about the different types of test plans and components of a good test plan
- Identify and discuss optimization tools and performance tuning
- Learn about the benefits of documenting your application

Module 17: Use imperative development techniques for canvas apps in Power Apps

- Understand imperative vs. declarative development
- Understand the variables in Power Apps
- Understand when to utilize each of the three different types of variables
- Lab: Using the variables and collections

Module 18: Create formulas that use tables, records, and collections in a canvas app in Power Apps

- Utilize formulas that process multiple records
- Use the Concat function to combine text from multiple records
- Utilize the Countrows, CountIf, ForAll
- Perform math operations on data in a table
- Lab: Using the ForAll function in a gallery

Module 19: Perform custom updates in a Power Apps canvas app

- Use the Patch function to update your data
- Understand how the Defaults function is used to create new records with Patch
- Use the Remove and RemoveIf functions to delete records
- Determine whether to use Clear and Collect or ClearCollect in their scenario

Module 20: Complete testing and performance checks in a Power Apps canvas app

- Use best practices to improve the performance of your app
- Understand how to best test an app
- Use fiddler for troubleshooting
- Lab: Use the Concurrent function to test performance

Module 21: Work with relational data in a Power Apps canvas app

- Understand relational data

- Use relational data to improve an app user's experience in Power Apps
- Understand how to use relational data in Microsoft Dataverse
- Lab: Work with relational data

Module 22: Work with data source limits (delegation limits) in a Power Apps canvas app

- Understand the different limits of different data sources
- Understand how functions, predicates, and operators all play roles in the limits
- Use this new understanding to choose the best data source for an app

Module 23: Connect to other data in a Power Apps canvas app

- Understand and use action-based connectors
- Integrate user information and user-profile information into a canvas app
- Use Power Automate with Power Apps

Module 24: Use custom connectors in a Power Apps canvas app

- Understand custom connectors and the basics of how to build one
- Understand the custom connector lifecycle

Module 25: Get started with Power Automate

- Signed up for Power Automate
- Have OneDrive for work or school
- Have or create a Mailchimp account
- Lab: Create recurring flows
- Lab: Monitor incoming emails
- Lab: Share flows

Module 26: Build approval flows with Power Automate

- Create and process approval requests
- Build a flow that runs at recurring time intervals
- Create a business process flow with conditions
- Lab: Build an approval request
- Lab: Create a business process flow
- Lab: Create a business process flow that has conditions

Module 27: Introduction to expressions in Power Automate

- Use one or more functions to create expressions
- Use functions to retrieve data, change data, evaluate data, and more
- Lab: Creating a manual flow and using expressions

Module 28: Introduction to Microsoft Power Platform developer resources

- Explain what solution components exist within Microsoft Power Platform
- Explain key components of Microsoft Dataverse and the Common Data Model
- Explain what Azure solution elements relate to Microsoft Power Platform
- Explain what AI Solutions exist as it relates to Microsoft Power Platform
- Navigate the Developer Guide successfully in support of their Microsoft Power Platform development efforts
- Lab: Prepare development environment

Module 29: Use developer tools to extend Power Platform

- Install NuGet packages available for Microsoft Power Platform development
- Work with the Configuration Migration tool
- Work with Package Deployer

- Leverage Solution Packager to isolate features
- Run the Plugin Registration Tool
- Lab: Use the Power Apps CLI
- Lab: Install and use developer tools

Module 30: Introduction to extending Power Platform

- Identify which elements architecturally comprise Microsoft Power Platform
- Learn about the areas of extensibility that are available to customize Microsoft Power Platform through code
- Discover different approaches to common business scenarios in respect to achieving extensibility with configuration versus code
- Lab: Create a custom API

Module 31: Introduction to Dataverse for developers

- Explain what functions can be executed against Microsoft Power Platform via Microsoft Power Platform SDKs
- Perform basic operations against Microsoft Power Platform such as create/read/update/delete operations

Module 32: Extend plug-ins in Power Platform

- Learn how to extend plug-ins
- Lab: Write your first plug-in

Module 33: Perform common actions with client script in Power Platform

- Write client scripts to perform common actions as listed in the module units
- Lab: Use client script to hide a form section

Module 34: Automate business process flows with client script

- Automate business processes using JavaScript/TypeScript API methods
- Lab: Use table data from client script

Module 35: Get started with Power Apps component framework

- Power Apps component framework architecture
- Power Apps component tooling

Module 36: Build a Power Apps component

- Create a custom Power Apps component
- Create a code component solution package
- Test and debug a code component
- Learn key concepts of Dataverse auditing

Module 37: Use advanced features with Power Apps component framework

- Use formatting API in a Power Apps component
- Use Dataverse web API in a Power Apps component

Module 38: Access Dataverse in Power Pages websites

- Discover Power Pages components that are available to help you display and interact with Dataverse data on a Power Pages website
- Identify the various features of the Power Pages components
- Display a list of data and an associated drill-down list for details
- Set up a form to access individual table rows
- Trigger classic Dataverse workflows from the website

- Lab: Use the list and form components

Module 39: Extend Power Pages websites

- Discover where software development can resolve particular website feature requirements
- Employ application lifecycle management (ALM) for Power Pages websites
- Apply JavaScript code to website assets
- Use Cascading Style Sheets (CSS) to address specific website development requirements
- Lab: Add advanced client-side functionality

Module 40: Build custom Power Pages web templates

- Learn about the relationship between web templates, page templates, and webpages
- Discover how you can build custom web templates by using HTML, Cascading Style Sheets (CSS), Liquid, and JavaScript
- Use Liquid template language to build and structure web templates
- Learn how to embed custom CSS and JavaScript into web templates
- Learn how to reference other web templates in a web template
- Lab: Create an extendable web template

Module 41: Work with Dataverse Web API

- Authorize against Dataverse with OAuth
- Use OData to query data

Module 42: Integrate Dataverse Azure solutions

- Publish Dataverse events to Microsoft Azure Service Bus
- Write a Service Bus Event Listener that consumes Dataverse events

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