AI-Powered Automation with Microsoft Power Automate and AI Builder

Target Audience

This course is designed for business professionals, IT administrators, automation specialists, and citizen developers who want to build intelligent, AI-powered workflows using Microsoft Power Automate and AI Builder. It is ideal for learners who want to enhance automation capabilities by incorporating AI features such as prompts, grounded prompts, and document processing within the Microsoft Power Platform ecosystem.

Course Objective

The objective of this course is to equip participants with the knowledge and practical skills required to design, build, and manage AI-powered automation solutions using Microsoft Power Automate and AI Builder. Participants will learn how to integrate AI models, prompts, and document intelligence into workflows to improve efficiency, accuracy, and decision-making in business processes.

Course Outcome

Upon successful completion of this course, participants will be able to:

- Design and implement automated workflows using Microsoft Power Automate
- Use AI Builder models within Power Automate flows.
- Create and use custom and grounded AI prompts.
- Automate document-based business processes using AI.
- Manage, monitor, and govern AI-enabled automation solutions.

Course Outline: The course comprises **40 hours** of theory and practical labs and is divided into 12 comprehensive chapters. Each chapter will be followed by hands-on lab exercises to reinforce learning and gauge understanding of the topics covered.

Module 1: Introduction to Microsoft Power Platform and Power Automate

Topics

- Overview of Microsoft Power Platform
- Introduction to Microsoft Power Automate

- Power Automate architecture
- Types of cloud flows (Automated, Instant, Scheduled)
- Licensing and environment basics

Lab

- Explore the Power Automate environment
- Create a basic cloud flow using a template

Module 2: Core Concepts of Power Automate

Topics

- Triggers and actions
- Connections and connectors
- Dynamic content
- Compose action and basic expressions
- Creating flows from templates and from scratch

Lab

- Create an automated cloud flow from scratch
- Use dynamic content and Compose action

Module 3: Flow Control and Business Logic

Topics

- Conditions and Switch actions
- Apply to each loops
- Variables
- Scopes and parallel branches

Lab

- Build a conditional approval workflow
- Implement parallel branches in a flow

Module 4: Advanced Flow Design and Error Handling

Topics

- Run after configuration
- Error handling patterns
- Retry policies
- Monitoring and troubleshooting flows

Lab

- Add error handling and retry logic to an existing flow

Module 5: Introduction to AI Builder

Topics

- Overview of AI Builder
- AI Builder capabilities
- AI Builder models and use cases
- AI Builder, Copilot, and Prompts overview

Lab

- Explore AI Builder models
- Add an AI Builder action to a Power Automate flow

Module 6: Using AI Builder Models in Power Automate

Topics

- Using AI Builder actions in cloud flows
- Configuring inputs and outputs
- Understanding confidence scores
- Validating AI model results

Lab

- Use AI Builder in Power Automate (guided Microsoft Learn exercise)

Module 7: Creating and Using Custom Prompts

Topics

- Introduction to AI prompts
- Custom prompt structure
- Prompt inputs and outputs
- Using prompt output in flow logic

Lab

- Create and use a custom prompt in a Power Automate flow

Module 8: Grounded Prompts for Reliable AI Results

Topics

- Grounded prompts overview
- Grounded vs ungrounded prompts
- Using Dataverse data to ground prompts
- Improving accuracy and reliability

Lab

- Create and test a grounded prompt using Dataverse data

Module 9: Document Processing with AI Builder and Prompts

Topics

- Overview of document processing
- Extracting text from PDF documents
- Passing document content to prompts
- Document summarization and classification

Lab

- Perform an AI prompt on a PDF document

Module 10: Multi-Step AI Automation and AI Hub Integration

Topics

- Overview of AI Hub
- Using AI Hub document outputs
- Chaining AI Builder models and prompts
- Designing end-to-end AI workflows

Lab

- Build a document AI to prompt to approval workflow

Module 11: Prompt Engineering Best Practices

Topics

- Writing effective prompts
- Improving prompt response quality
- Handling large text inputs
- Performance and cost considerations
- Responsible AI principles

Lab

- Optimize prompts for accuracy and consistency

Module 12: Administration, Governance, and Maintenance

Topics

- Power Platform environments
- Data Loss Prevention (DLP) policies

- Security roles and permissions
- Monitoring AI-enabled flows
- Sharing, disabling, and deleting flows

Lab

- Configure and test DLP policies
- Monitor and manage Power Automate flows