



# PowerApps and Flow: Designing Modern Forms and Workflows

Course ISI-1526      3 Days      Instructor-led, Hands on

## Course Information

This course delivers an instructor-led breakdown of Microsoft PowerApps. Students will be taught how to design, test and publish new apps that work with a variety of data sources. We will take users through a selection of well-crafted lessons to help them build new applications for their business.

You will also learn Microsoft Flow from start to finish in an engaging and practical way. Flow is a diverse product, turning business processes into automated, consistent and visual workflows. Flow is designed to interweave the various products in Office 365 as well as connect to other on-premises and web-based solutions. This course will give you the confidence to select the right actions and workflow logic for your business workflows.

This class has something for everything, from beginners who wish to customize their data entry forms in SharePoint right up to advanced users who need to use advanced formulas to deliver more bespoke actions to their apps.

## At Course Completion

After completing this course, students will be able to:

- Understand when to use PowerApps
- Describe the components of PowerApps and their correct use
- Create PowerApps from existing data sources
- Brand PowerApps
- Customize PowerApps beyond just using the automated wizards
- Connect to a range of data sources from Excel to Azure SQL
- Understand the difference between canvas apps and model-driven apps
- Integrate PowerApps with other Office 365 systems – including Teams and SharePoint Online
- Administer and Maintain PowerApps.
- Understand when to use Flow
- Describe the components of Flow, and their correct use
- How to create and edit Flows
- Benefits of Flow
- Integration with Flow

## Prerequisites

Before attending this course, students must have:

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- Basic knowledge of the Microsoft Windows operating system and its core functionality.
- No previous experience of PowerApps is required.

## Course Outline

### Module 1: An Introduction to PowerApps

Let's get started with an introduction to Microsoft PowerApps. Traditionally building customized solutions for a business involved using a coding language to build an application from scratch. Typically, these solutions could often only be used within the business, making external use of the application a large hurdle to overcome. With PowerApps we can now not only easily build solutions, but we can also share them with users in our business. Deployment takes seconds and you could be testing your own app on your phone in no time. This module will overview the features of PowerApps, its benefits to a business and the variety of ways you can build and access your apps on different devices.

#### Lessons

- What is PowerApps?
- The benefits of apps
- How to get PowerApps
- Canvas Apps and Model-Driven Apps
- License Options and Costs
- Discover PowerApps with Templates

#### Lab: Introduction to PowerApps

- Try the Cost Estimator App
- Download and Review App Design
- Sample App of your choice

After completing this module, students will be able to:

- Describe when PowerApps should be used
- Know how to access PowerApps
- Make design decisions based on PowerApps licenses
- Understand that there are two type of app
- Be able to use sample apps

### Module 2: Getting Started with PowerApps

To begin our journey through the PowerApps product, we will begin by looking at some of the templates that are available to view and edit. Microsoft's templates are a good starting point to discover what the product is capable of and how it can be achieved. We will also take the chance to have a tour of the editor so that students are familiar with the interface that they will be using over the two-day course. We will then build our first app from a static

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data source, showing students how to test their changes in the app instantly without the need to publish. We will also discuss how to configure your apps settings and how to access the app once it has been saved and shared.

#### Lessons

- Building a new app from a data source
- Add, edit and remove controls
- Intro to Formulas
- Testing an app
- App Settings
- Publish and Share Apps
- Version History and Restore
- PowerApps Mobile App

#### Lab: Getting Started

- Create App from an existing Data Source
- Publish and Share
- View an app on your mobile device

After completing this module, students will be able to:

- Build a useful app using wizards in minutes
- Make simple changes to existing apps
- Know how formulas are used in PowerApps
- Be able to test an app before it is shared
- Restore a previous version of an app in the event of a problem

### **Module 3: Branding and Media**

In our next module, we will look at the options available to designers that allow them to implement their business branding. Not only will this deal with the aesthetics of your app, it will also introduce time-saving tips to help keep your branding consistent. We will also be discussing how to embed media into your app which can be useful if you are planning on an app that might promote video content.

#### Lessons

- Less is more
- Duplicate Screens
- Fonts
- Screen Colors and Matching Colors
- Screen Backgrounds
- Buttons and Icons
- Hide on Timer
- Size and Alignment by reference
- Show and Hide on Timer

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#### Lab: Branding and Media

- Backgrounds and icons
- Import Class Data from Excel
- Duplicate Screen

After completing this module, students will be able to:

- Customize apps backgrounds with images and color
- Add images and logos to an app
- Use times to show and hide controls
- Align and size controls

### **Module 4: PowerApps Controls**

So far in the course, we would have covered the basics of adding, editing and removing controls from our applications. The drive behind this module is to provide more depth on the categories of controls which can be used on a form. Your instructor will take you through each control and discuss its purpose and configuration. Tackling the wide selection of controls will help students recognize when to use the right control.

#### Lessons

- Text Controls for Data Entry and Display
- Controls – Drop downs, combo box, date picker, radio button and more
- Forms – Add and edit data in underlying data sources quickly
- Charts – present information in pie, line and bar charts

#### Lab: Build Apps from Blank

- Create an App from the blank template
- Add Controls to collect and display data
- Add Formulas to allow the controls to interact

After completing this module, students will be able to:

- Use a wide range of controls to give users the best data entry experience
- Edit control properties
- Use formulas to all multiple controls to interact with each other
- Present information using charts

### **Module 5: Data Sources and Logic**

To help maintain and view essential business information, organizations often have a diverse selection of locations to keep different types of data. This could range from databases to file storage locations. PowerApps offers connections to a wide selection of data sources. We will show students to build their PowerApps to bring in data from a variety of sources as well as how they can utilize the common data source, a storage location unique to PowerApps.

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## Lessons

- Data Storage and Services
- How do I decide which database to use?
- Connect to on-premises data - Gateway
- What is Delegation?
- Specific Data Examples
- Displaying Data

## Lab: Data Source and Logic

- SharePoint List connect to App
- Flow to collect tweets to SharePoint
- Display Tweets in PowerApps using the Twitter service
- Create a reply screen in PowerApps

After completing this module, students will be able to:

- Connect to many data source including cloud and on premises
- Understand the financial costs of working with different data sources
- Understand which data sources can work with large amount of data
- Display data using controls

## **Module 6: Model-Driven Apps**

Module one to five discussed how to work with the original type of PowerApps known as a Canvas App, Microsoft have now introduced a second type of app known as a model-driven app. Model driven apps involve a different development process to canvas apps. We will review this development process during this module.

Model-Driven apps can be quicker to build than canvas apps, but they are less customizable and typically have a higher cost, knowing which type of app to use is not always a simple decision, we will show you the pros and cons of each.

## Lessons

- What is a model-driven app?
- Where will my data be stored?
- How do create a model-driven app
- Canvas vs model-driven summary

## Lab: Model-Driven App

- Switch to Model-Driven mode in PowerApps
- Navigate the Model-Drive app interface
- Test a Sample App
- Edit the Sample App

After completing this module, students will be able to:

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- Describe the difference between a canvas app and a model-driven app
- Access model-driven apps
- Edit model-driven apps

## **Module 7: PowerApp Integration**

PowerApps is designed to easily connect to other business systems to read and update information. In this module we will discuss some simple ways to integrate PowerApps with key Office 365 systems including Teams, SharePoint Online and Flow. The result is the ability to use a combination of systems to create solutions for a variety of business requirements.

### Lessons

- Embed PowerApps in Teams
- Embed PowerApps in SharePoint Online
- Start a Flow from a PowerApp

### Lab: PowerApp Integration

- Embed your app in Microsoft Teams
- Embed your app in SharePoint Online

After completing this module, students will be able to:

- Know how to make PowerApps available for users via Teams and SharePoint Online
- Understand the benefits of using PowerApps with Flow

## **Module 8: Administration and Maintenance of PowerApps**

In our last module for Microsoft PowerApps, we will be looking at how a business can manage their existing apps. This could be using analytics to discover usage trends. We will discover how to export and import apps, so they can be reused in other locations. Finally, we will discuss how Office 365 administrators can shape the PowerApps experience with high-level settings that help ensure data segregation and security.

### Lessons

- Identify which users have been using PowerApps
- Reuse an app in another location (move from testing or development to production)
- Review app usage
- Prevent a user from using PowerApps
- Manage environments

### Lab: Administration and Maintenance

- Export an app for use in another location
- Review current PowerApps users in your test environment

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After completing this module, students will be able to:

- Identify who is using PowerApps in your organization
- Prevent specific users from using the PowerApps service
- Reuse or move existing apps

## **Module 9: An Introduction to Flow**

Let's get started with an introduction to Microsoft Flow. Historically, automating business processes typically landed in the lap of a developer in the business, who has a good understanding of coding and the systems that they were connecting. However, more and more systems deployed to businesses are encouraging a bigger focus on end user design and management. With this culture change, end users are looking to further improve their business solutions. Flow brings workflow design to all audiences. It offers the building blocks for lightweight or business-critical processes. In this module, we cover an overview of the product and its application to Office 365 and third-party services.

Lessons

- What is Microsoft Flow?
- The benefits of automation
- How to get to Flow

Lab: Setup your tenant

- Setup Office 365
- Download Course Files
- Customize your App Launcher
- Create accounts for colleagues

After completing this module, students will be able to:

- Know what Microsoft Flow is
- The Benefits of using Flow to automate processes
- How to access a flow

## **Module 10: Getting Started with Flow**

We begin our discovery of Microsoft Flow by building our first business process. We will discuss how to use templates to get started with Flow or how to use a blank template to start with no defined actions. Once in the product, we will give you a tour of the editor, workflow management page and the home screen to help you navigate around the product. Next, we will start to add, edit and remove actions from our workflow template in order to customize the Flow for a specific business need. Once ready we will publish and trigger the workflow to test that it works as expected. We will finish this module by discussing how to turn a Flow on or off as well as deleting a Flow.

Lessons

- Using Flow templates

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- Navigating in Flow
- Editing a Flow
- Publish and trigger a Flow
- Turn off or delete a Flow

Lab: Building processes in Office 365

- Create a Team with a channel
- Build an absence business process
- Testing the absence process
- Optional: Create Feedback Form
- Optional: Flow to Notify of Bad Ratings
- Optional: Test your Form and Flow

After completing this module, students will be able to:

- How to use Flow templates
- How to navigate around Flow
- How to edit Flows
- How to publish and trigger Flows
- How to turn off or delete Flows

## **Module 11: Flow logic**

Decision making during a business process is often a bottleneck. Waiting for decisions or information to steer the workflow towards its goal is dependent on how long the involved party spends on the task. This could be mitigated if the desired information is found declared elsewhere for example, as a document property or a form entry to name a few examples. Logic in a workflow allows existing information to push the workflow down multiple paths. This often speeds up workflow duration and minimizes human input. In this module, we will look at the core logic found in Flow and a practical application of each option.

Lessons

- Adding conditions
- Designing switches
- Using apply to each
- Configuring do until logic
- Adding a scope

Lab: Scheduling documentation reviews

- Setup a policy library in SharePoint
- Design a policy review schedule
- Testing the policy review process
- Optional: Notify if a file nears review

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After completing this module, students will be able to:

- How to add conditions in a flow
- How to design switches for a flow
- How to use apply to each
- How to configure do until logic
- How to add a scope

## **Module 12: Integration**

Businesses will often use a selection of productivity tools and services beyond Office 365. Marketing teams may use Facebook and Twitter whereas a sales team may use Salesforce to manage their customers. Flow provides connectors for popular services allowing your processes to extend beyond Office 365 to other web services. Connections can even be made to on-premises servers, allowing your business systems house at the office to take part in your processes.

Lessons

- Standard and premium connectors
- Connecting to web services
- Using Flow with on-premises data

Lab: Using Flow and SQL to Review Sales

- Create a new orders list
- Designing the price check process
- Testing the price check process
- Optional: Update with managers

After completing this module, students will be able to:

- How to use Standard and Premium connectors
- How to connect to web services
- How to use Flow with on-premises data

## **Module 13: The mobile app**

Flow has a corresponding mobile app that can be used to leverage many features of Flow. Firstly, it offers users the capability to build new Flows, directly from their phone or tablet. Secondly, it can be used to manage existing flows including editing, viewing history, saving a copy, disabling and deleting Flows. You can access any approvals that have been sent to you by Flow and approve or reject decisions. The app also supports the push notifications that can be sent to your phone or tablet from a Flow. Additionally, you can even create buttons that appear in the app which allow you to trigger Flows. This valuable app will be detailed in this module.

Lessons

- Downloading the mobile app

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- Signing in and account management
- Building and managing Flows
- Creating buttons
- Feeds and approvals

Lab: Optional: Using the flow mobile app

- Setting up the Flow mobile app
- Create a new flow in the mobile app
- Using flow buttons in the app
- Uninstall the flow mobile app

After completing this module, students will be able to:

- How to download the mobile app
- How to sign into the mobile app
- How to build and manage flows in the mobile app
- How to create buttons in the mobile app
- How to feed and use approvals in the mobile app

## **Module 14: Administration and maintenance**

In our last module for Microsoft Flow, we will look at how a business can manage their Flows once they have a good uptake of the product. We will begin by discussing managing individual Flows. This could be using history to discover the source of any issues and implement error handling as well as using the analytics to discover usage trends. We will discover how to share a Flow which is ideal for sharing the maintenance of a Flow with another colleague and how to import and export Flows. Finally, we will discuss how Office 365 administrators can shape the Flow experience with high-level settings that help ensure data segregation and security.

Lessons

- Maintaining a Flow
- View history and analytics
- Sharing a Flow
- Export and import Flows
- Office 365 administration for Flow
- Environments
- Data policies
- Data integration

Lab: Maintaining your flows

- Share a flow with a colleague
- Disabling an active flow
- Deleting a flow

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After completing this module, students will be able to:

- How to maintain a flow
- How to view history and analytics for a flow
- How to share a flow
- How to export and import flows
- How to administrate a flow in Office 365
- How to use data policies in a flow
- How to use data integration in a flow

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