

## Xamarin Certification Training

**Course#:MA-02**  
**Duration:5 Days**  
**Price:800.00**

### Course Description

The mobile app development space is a very exciting and happening place to be involved with right now. It has been projected that by 2021 the total number of apps downloaded would be a staggering 352 billion. Mobile app development is among the hottest career trends with salaries going up to \$105,299 annually. Learning the Xamarin Studio, the Integrated Development Environment (IDE) used to create Android, iOS, and Mac applications, will help you forge a career in mobile development.

Our comprehensive curriculum will help you thoroughly understand the platform right from installation to configuration, controls and web services. You will learn how to use the Xamarin platform and build mobile applications by incorporating Xamarin Forms, XAML, lists and views. Write code to access the database and application resources and the basics of testing and publishing. Use Xamarin best practices to create and publish your own native iOS and Android apps. Our workshop is fully experiential and will make you industry ready through the hands on lab sessions that focus on giving you maximum exposure on the Xamarin platform.

Enrol now and get started on a lucrative career in app development.

### Objectives

#### 1. Introduction

Why Xamarin is so popular with cross-platform native applications development

#### 2. Xamarin for apps

Build native iOS and Android apps and take your app development strategy to the next level

### 3. Cross platform tool kit

Write cross-platform UI code in a simple and concise manner and run the applications

### 4. Xamarin Essentials

Learn how to use XAML, data binding and controls, within your Xamarin. Forms applications

### 5. Using Data

Learn the common data access patterns for Xamarins iOS and Android platforms

## **Audience**

## **Prerequisites**

Good Understanding of C#/.NET Programming Concepts

Good Understanding of OOPS Concepts

Basic Knowledge of OS X usage and navigation would be desired, not mandatory

## **Content**

Learning Objectives:In this module, you will get started on Xamarin. You will learn about its installation, architecture and IDE, and about Xamarin cross platform solutions, advantages and disadvantages. Set up and install Xamarin Development Environment in Windows and iOS and Mac, and verify your installation. Learn about Xamarin Shared projects and writing code that can be referenced by a number of different application projects. Finally, you will also learn about cross development platform with portable class library, Forms, Layout options, XAML, Resource dictionary and perform navigation in Forms.

Introduction to Xamarin 35 Mins

Topics:

Introduction to Xamarin

Xamarin vs. Hybrid Framework vs. Native Framework

Xamarin Development IDE Visual Studio and Xamarin Studio

Xamarin Architecture

Introduction to Mono

Xamarin Development 35 Mins

Topics:

Xamarin Cross platform solutions

Xamarin Family

Xamarin Development Approaches

Xamarin Advantages

Xamarin Disadvantages

Setup the Development Environment on Windows- 35 Mins

Topics:

Setting up Xamarin on Windows

Configuring Visual Studio and SDK for Android and Windows UWP

Configuring Visual Studio Emulator for Android and UWP

Verify your Xamarin environment on Windows

Setup the Development Environment on Mac 35 Mins

Topics:

Setting up Xamarin on Mac

Configuring XCode, Visual Studio and Android SDK

Verify your Xamarin environment

## Xamarin Project Types 35 Mins

### Topics:

Xamarin Shared Projects  
.NET Standard Libraries

## Xamarin Forms

### Xamarin Forms - 35 Mins

### Topics:

Introduction to Xamarin Forms  
Xamarin Forms Architecture  
Xamarin Forms UI  
Xamarin Forms UI Rendering Process  
Xamarin vs. Xamarin Forms  
Xamarin Forms Code Sharing Strategy  
.NET Standard Library or Shared Project  
Advantages of .NET Standard Library over Shared Project

## Xamarin Forms Fundamentals 30 Mins

### Topics:

Pages  
Views  
Layouts  
Cells

## Xamarin Forms Views/Controls and Views Alignment 30 Mins

### Topics

Xamarin Forms Views/Controls

Comparing Xamarin Forms Controls with Native Views Alignment

## Xamarin Forms App Life Cycle 30 Mins

### Topics:

Xamarin Forms Application Methods

Comparing Android and iOS and Windows App Life Cycle

## XAML

### Topics:

## XAML 30 Mins

Introduction to XAML

How XAML Works?

Advantages of XAML

XAML vs. Code

XAML Compilation

Xamarin XAML Page

## XAML Properties

XAML Properties Syntax

Attached Properties  
Content Properties  
XAML Markup Extensions  
Other XAML Standard Markup Extensions

Resources 30 Mins

Topics:

Introduction to Resources  
Resource Dictionary  
Static and Dynamic Resources  
Styles

Xamarin Forms Fundamentals

Layouts 30 Mins

Topics:

Xamarin Forms Layouts  
Layout Options  
Stack Layout  
Grid Layout  
Relative Layout  
Relative Layout - Constraint Expression Properties

Layouts Contd. 30 Mins

Topics

Absolute Layout

Absolute Layout Flags

Comparing iOS, Android and Xamarin.Forms Layouts

Content View

Scroll View

Frame

FlowLayout

Navigation- 30 Mins

Topics:

Introduction to Navigation

Hierarchical Navigation

Modal Pages

A Simple Master Detail

Master Detail Page

Tabbed Page

Carousel Page

Displaying Popups

Toolbar Items

Learning Objectives: Learn about Lists in Xamarin and setting up database access. Understand how to integrate multimedia in Forms, and using Telephony for monitoring basic phone information.

Lists 90 Mins

Topics:

Populating a Basic List

Cell Appearance

- Custom Cells
- Grouping Items
- Handling Selections
- Context Actions
- Pull to Refresh
- Search Bar

## Data Binding and MVVM 120 Mins

Topics:

- Data Binding
- Data Binding Modes
- MVVM
- MVVM Event Handling
- Events and Handlers
- ICommand Interface
- Command with a Parameter
- Triggers

## Data Access SQLite 90 Mins

Topics:

- Setting Up SQLite
- Using SQLite
- INotifyPropertyChanged Interface

## Multimedia 90 Mins

Topics:

Multimedia API  
Playing Audio  
Playing Video  
Accessing Camera  
Alarm Manager  
Gallery

Telephony API 90 Mins

Topics:

Telephony Manager  
Phone State  
SIM state  
SIM Number  
Network Type  
Internet Status  
Making Phone Call  
Send SMS

Learning Objectives: Learn about REST services, Converters, Behaviors, Plugins and Themes in Forms. Learn to create real world charts in Xamarin and understand the Xamarin .Essentials library.

Working with REST Services 30 Mins

Convertors 30 Mins

Behaviors 30 Mins

Content Renderers 30 Mins

Using Charts in Xamarin. Forms Application 30 Mins

Using Plugins 30 Mins

Topics:

Create Popup windows

Basic Animations

Internet Connectivity

Battery

Phone Details etc.

Effects-Themes 30 Mins

Topics:

Light Theme

Dark Theme

Customizing Theme

Working with Data Pages

Working with Xamarin. Essentials 30 Mins

Learning Objectives: Learn about designing Notifications and handling long running tasks with Async. Learn to handle memory management issues and secure local data using Xamarin Auth. Learn about Data caching and synchronization and automating the testing of Xamarin applications. Also, learn about Xamarin development best practices.

Consuming Azure App Service 45 Mins

Notification 45 Mins

Topics:

Notification API  
Creating Notification Builder  
Setting Notification Properties  
Attaching Actions  
Issuing Notification

Handling Long Running Tasks 45 Mins

Diagnosing Memory Management Issues 60 Mins

Securing Local Data 45 Mins

Topics:

Using Xamarin. Auth and PCL Crypto to securely store data on-device

Data Caching and Synchronization 60 Mins

Mini Project on Xamarin 60 Mins

Automated Testing of Xamarin Applications 60 Mins

Topics:

Test Driven Design  
Challenges in Testing Xamarin Applications  
Testing the User Interface with Visual Studio App Center

Understanding Best Practices in Developing Xamarin Mobile Applications 60 Mins

Topics:

## Walk Through: Xamarin.Forms Multiple Projects

Learning Objectives: Get an understanding of how to build a Xamarin app on Android. Learn the Android fundamentals, navigation, services, ListViews, Adapters and other important concepts through hands-on labs. Run, deploy and test your app. Also, learn about developing an iOS app in Xamarin. Learn concepts of TableView, Navigation, Auto layouts and testing and publishing the apps.

### Xamarin.Android - Overview

#### Xamarin.Android 40 Mins

Introduction to Android

Android Architecture

Introduction to Xamarin.Android

Xamarin.Android Application Structure

Xamarin.Android Architecture

Xamarin.Android Code Compilation

Xamarin.Android APIs

#### Android fundamentals 40 Mins

Activities

Views

Layouts

Resources

Manifest

#### Android Activity 40 Mins

Activity Life Cycle  
Activity Life Cycle Events  
Activity States

ListView and Adapters in Android 30 Mins

RecyclerView and CardViews 30 Mins

Toolbar and AppBar 30 Mins

Android Navigation 30 Mins

Android Services

Running, Deployment, Testing 30 Mins

Deploying app to Emulator and Devices  
Debugging in Emulator  
Debugging in Device  
Android Debug Log  
Testing app in different emulator

Xamarin.iOS - Overview

Introduction to Xamarin.iOS 30 Mins

1. Create a Project, Define the UI and Implement Behavior

Introduction to Xamarin Designer for iOS 30 Mins

2. Use the Xamarin.iOS storyboard to design a responsive, multi-screen application

Fundamentals of TableViews 30 Mins

3. Display a data collection using the iOS UITableView

Customizing TableViews 30 Mins

4. Create a unique look for TableView rows by implementing a custom UITableViewCell

AutoLayouts and Constraints 30 Mins

Navigation Patterns 30 Mins

5. Implement the Stack, Tab, Master-Detail and Pager UI Navigation patterns

Publishing an iOS App 30 Mins