

# Developing Mobile Applications for iOS with Swift

Learn via: **Classroom / Virtual Classroom / Online**

Duration: **5 Day**

## **Overview**

Building on your existing development experience we introduce Swift and then explore iOS as a platform. Next we explore the core architecture of an iOS app from basic UI construction through to data, location, animation and even asynchronous cloud access.

This course is hands on and you will build everything you see. By the end you will be able to incorporate many of iOS's most advanced features into your own apps.

## **Prerequisites**

There are no prerequisites for this course.

## **Who Should Attend**

Having basic programming knowledge and having an idea about application development algorithms is enough. This training is also an appropriate starting point in terms of introduction to programming at the same time.

## **What You Will Learn**

This training is designed to enable developers to quickly build applications on the iPhone / iPad for beginners' programming experience. In the course of the training, you will learn how to develop iPhone / iPad apps using the Swift language, participate in the Apple Developer program, install the developed apps on your iPhone and iPad devices, and market your developed apps through the App Store.

## **Outline**

### **1 - iOS Development**

- A bit of history
- iOS Architecture
- Cocoa Framework
- Xcode overview
- Anatomy of an iOS Application

### **2 - Swift 101**

- Data Types and Optionals
- Operators
- Control Flow
- Functions and Parameters
- Closures

### **3 - Swift 102**

- Classes and Encapsulation
- Initializers
- Defining Properties and Methods
- Setting up Inheritance
- Protocols & Delegates
- Generics
- Defining Categories

#### **4 - Views and View Controllers**

- Views
- View Controllers under the hood
- Introduction to Interface Builder
- Defining Storyboards Scenes and Segues
- Navigating between scenes
- Handling memory warnings

#### **5 - Understanding Table Views**

- Understanding Table Views
- Static and Dynamic Table Views
- Designing custom table cells
- Handling delegate events in a table view
- Introduction to Collection Views

#### **6 - Extending the User Interface**

- Autolayout
- Size Classes
- Dynamic Type
- Working with the UI Controls
- Dealing with Date/Time
- Unwind Segues
- Gesture Recognizers

#### **7 - Universal Adaptive Apps**

- Universal Apps
- Using the Split View Controller with iPad and iPhone
- Popover Presentation Controllers
- Modal View Controllers

#### **8 - Working with local Data**

- Creating and accessing files
- Storing user preferences
- Storing data in the keychain
- Storing and retrieving data from a SQLite database

#### **9 - Core Data**

- Configuring, accessing and querying Core Data
- Adding, Updating and deleting Core Data
- Core Data and iCloud

#### **10 - Asynchronous Programming**

- Making the UI more responsive with asynchronous queues
- Dispatch Queues and Grand Central Dispatch
- Operation Queues

#### **11 - Animation**

- Using animation to create compelling user interfaces
- Basic UIView animations
- Introduction to UIKit Dynamics

#### **12 - Accessing Cloud Services**

- Sending/Retrieving data from the Cloud
- Processing JSON Data
- Processing XML

#### **13 - Location Services and Notifications**

- Receiving and managing location notifications
- Beacons
- Using Notification Center to observe and publish notifications
- Local and Push Notifications

#### **14 - Multitasking**

- Working with Background Mode
- Using Background fetch

## 15 - Profiling and Analysing code

- Analyzing your code
- Profiling your code